THE RUBBER AGE

ESTABLISHED 1917

COVERS ALL PHASES OF THE PRODUCTION AND MARKETING OF CRUDE RUBBER AND THE MANUFACTURE AND DISTRIBUTION OF RUBBER GOODS

Vol. 35 MAY, 1934 No. 2

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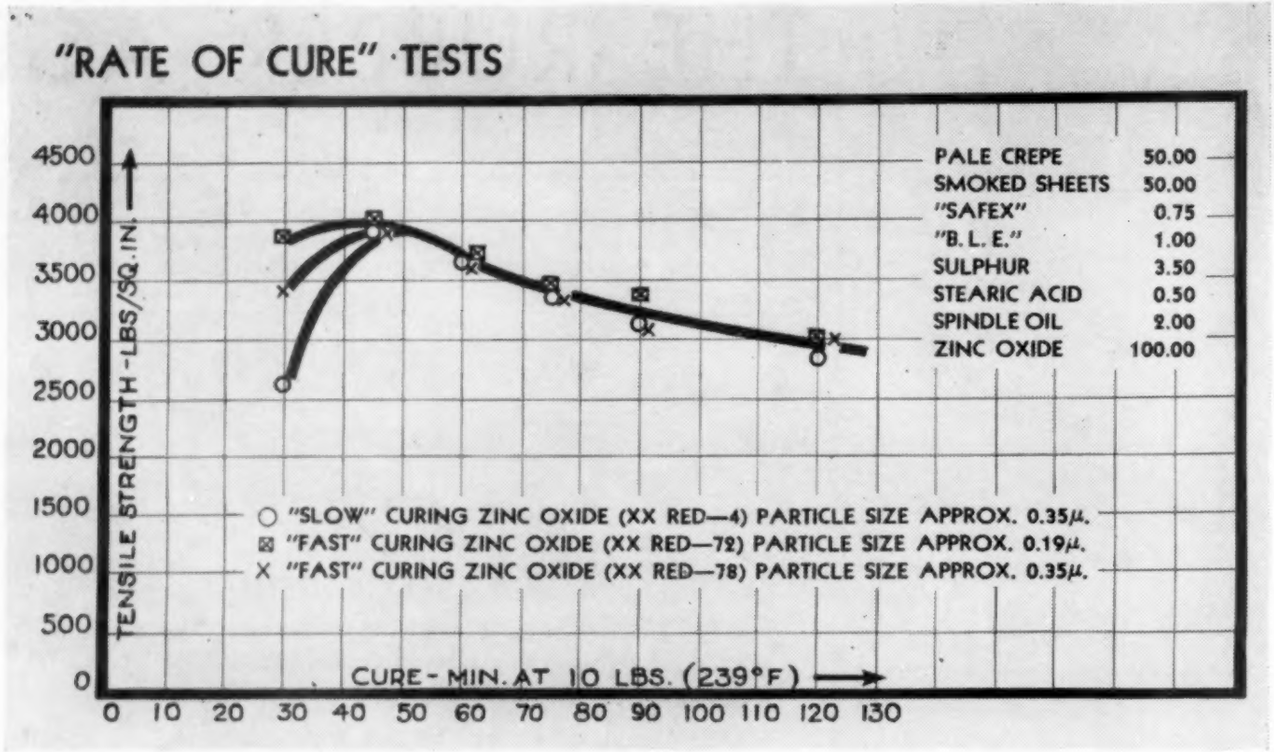

No. 26 of a series of charts showing a comparison of "fast" and "slow" curing zinc oxides with typical accelerators.

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THE RUBBER AGE

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Vol. 35 MAY, 1934 No. 2

Producing Countries Agree on Crude Rubber RESTRICTION

Anglo-Dutch-French Pact Proscribes New Planting and Regulates Output for Five Years—30% Cut in Permissible Exports Is Planned by December

NEW YORK, May 14

DEFINITE announcement of an international five-year plan for the restriction of crude rubber production was made public on April 28, following months of negotiations between representatives of rubber-growing countries. Awaiting only official government sanction, the agreement is scheduled to go into effect on June 1 after nearly six years of unrestricted rubber output and export.

The agreement was signed at The Hague and applies to the territories of Malaya, the Netherlands, East Indies, India, Ceylon, Burma, French Indo-China, North Borneo, Sarawak and Siam. Maximum export quotas are allotted to each of the nine countries for every year until 1938, and the international regulation committee which is to administer the scheme will determine periodically the percentage of these quotas to be exported from each territory.

News of the accord, particularly in view of the absence of any suggestion as to what the committee might consider a fair or pivotal price for the commodity, led to a bullish movement on the crude rubber markets of the world. In the New York outside market, rubber promptly advanced from a price of 12 11/16 cents a pound on April 28 to 15½ cents by May 7, but fell back to 12⅞ cents by May 12.

Under the plan, further planting will be prohibited because "the present supply is more than sufficient to satisfy any probable world demand for years to come." An exception of a quarter of 1 per cent of any country's present acreage was made for experimental purposes. Replanting will be limited to 20 per cent of the existing areas under cultivation, thus providing for depreciation. Such a provision, however, it was understood, would not permit of any acreage increase during the life of the pact.

The plan also prohibits the export of "planting materials" from countries signatory to the agreement. This provision is intended to discourage planting in territories outside the scope of the agreement.

In order to prevent abnormal accumulation of stocks, producers and dealers will be obliged to keep their stocks at a level which provides a "normal percentage of turnover."

More definitely, the Rubber Growers Association stated that legislation is to be framed to prohibit any planter from holding stocks of rubber exceeding 20 per cent of the quantity grown, produced and removed from his estate during the preceding 12 months. As an alternative, a planter's stock must not exceed twice the amount he is entitled to export during any month. Further, each

government, except Sarawak and Siam, is to limit the total of the stocks in its territory to 10½ per cent of its permissible exportable amount for each control year.

The International Rubber Regulation Committee set up by the agreement is to be constituted of government delegates. Its functions will be chiefly to decide the percentage of each country's quota which can be exported. It is understood that the present intention is to permit exports at the rate of 100 per cent of the maximum quotas in June and July, 90 per cent in August and September, 80 per cent in October and November, and 70 per cent in December. In the event that stocks do not show a sufficient reduction by that time, a reduction of permissable exports to 60 per cent of the maximum quotas will be resorted to.

Manufacturers' Delegates May Participate

Representatives of the rubber manufacturers of the United States and Europe will be invited to nominate delegates who may periodically confer with the International Rubber Regulation Committee. This consumers' group will, however, act only in an advisory capacity.

The plan will be in operation from June 1, 1934, to December 31, 1938, but the committee may recommend that the governments extend it. The object of the plan is officially stated to be as follows:

"It has been considered necessary and advisable that step should be taken to regulate the production and exports of rubber in and from rubber-producing countries with the object of reducing existing world stocks to a normal figure and of adjusting, in an orderly manner, supply to demand and maintaining a fair and equitable price level which will be reasonably remunerative to efficient producers."

The maximum quotas allotted for the principal producing countries for each of the five years follow:

(Thousands of tons to nearest 500)

	1934	1935	1936	1937	1938
Dutch East Indies	352	400	443	467	485
Malaya	504	538	569	589	602
Ceylon	77	79	80	81	82
India	7	8	9	9	9
Burma	5	7	8	9	9
North Borneo	12	13	14	15	16
Sarawak	24	28	30	31	32
Siam	15	15	15	15	15
Total	996	1,088	1,168	1,217	1,251

Special arrangements have been made for French Indo-China because France imports four times the quantity exported there. Including French Indo-China and other minor territories, the total maximum quota begins with 1934 at 1,019,000 tons and increases each year so that by 1938 the supply quota will have been expanded by more than 25 per cent.

To discover new uses for rubber, all the governments except Sarawak and Siam have been invited to levy a tax on exports to cover the cost of experiments.

Sentiment in this country on the restriction plan has been that no objection can logically be raised so long as the price of the commodity is held within a reasonable range. Harvey S. Firestone, chairman of the Firestone Tire & Rubber Company, predicted an increase in tire prices as soon as the plan takes effect. William de Krafft, chairman of the finance committee of the United States Rubber Company, declared that the idea would not work out in practice.

"It seems to me," said Mr. de Krafft, "that the plan is defective in that it does not provide either for the maintenance of a fair market price for crude rubber or for an adequate supply. It is now time for our government to request the governments of Great Britain and The Netherlands that there be inserted in any plan which those governments ratify provisions which will be adequate both as to the maintenance of a fair market price and for a sufficient supply of crude rubber." Mr. de Krafft last month proposed an alternative restriction scheme, based on the annual pooling of a maximum of 170,000 tons of rubber in the hands of a control committee to balance the price at approximately 4d gold.

Charles Slaughter, president pro tempore of the Commodity Exchange and vice-president of the rubber division of the exchange, said, "In a general manner, it would appear that the scheme attacks the problem of crude rubber overproduction from the supply and demand rather than the price angle. It is an effort to regulate supply in accordance with existing demand, the primary object being to reduce existing world stocks to a normal figure, thereby providing for circumstances which will help to maintain a fair and equitable price for both producers and consumers of the commodity."

Recalling that the rubber industry, particularly the producer, has been experiencing difficulties for the last five years due to the extremely low prices, F. R. Henderson, first president of the old New York Rubber Exchange, said, "Conditions have precluded scientific development, necessary repairs to buildings and properties, and there has not been a reasonable return for the capital invested. I am inclined to the belief that a situation has been set up wherein the normally increased demand and the supply will about balance, and that a price stabilized to, say, 20 to 25 cents a pound will eventually result. At such a price the rubber producers will be in a position to recoup the losses of the last five years, make necessary repairs, and again earn a reasonable profit."

Mr. Firestone, together with his son, Harvey S. Firestone, Jr., called at the State Department at Washington on April 26 to confer with Secretary Hull in regard to the financial rehabilitation of Liberia. The Firestone company has 55,000 acres of crude rubber now planted in Liberia and, according to Mr. Firestone, 5,000 acres can be tapped this year if the League of Nations and Liberia can agree on a plan for financial rehabilitation.

Darvan—A Dispersing Agent

THE ADDITION of compounding materials to liquid latex involves complications that do not occur in dry mixing, since the dry powders are usually insoluble in water and are not wetted properly by the latex. They can not be stirred in to give a uniform dispersion, because they tend to collect in clumps or balls of dry powder surrounded by latex. This condition frequently results in coagulation of the latex as soon as the dry powder comes in contact with it.

To overcome this difficulty, it is customary to make compounding ingredients into pastes or suspensions with water before adding them to the latex. The problem, therefore, becomes one of getting the materials properly dispersed in water, and Darvan is a new agent developed for that purpose. A water solution of a synthetic organic chemical, it contains about 40 per cent of dry, active material. It is neutral or slightly alkaline in reaction and is non-toxic, with no discoloring effect on the finished article. It is stable and unaffected by light or heat, and keeps indefinitely. Darvan has no effect on rate of cure or aging of rubber compounds. It is said to disperse practically every powder in water, to allow more powder or less water for a given consistency, and to retard coagulation. It does not cause frothing and does not ferment, putrefy or mold.

This material has been developed by the Dewey & Almy Chemical Company, Cambridge, Mass., and arrangements have just been completed for its sale to the rubber industry exclusively through the R. T. Vanderbilt Company, 230 Park Avenue, New York City.

Dutch Plantation Interests Elated Over Restriction Announcement

Netherlands Growers Expect a Period of Prosperity Despite Continued Increase in Native Production

By HENDRIK DE LEEUW

(Written Specially for THE RUBBER AGE)

EXPRESSING the reaction of the rubber fraternity at Amsterdam to the news of the restriction agreement, this article, written on the day the new pact was signed, should be of particular interest to the American industry. Certain details, such as the exact percentage of restriction for the balance of this year, have since been made more definite. Mr. de Leeuw in a previous article on "Native Rubber Cultivation in the Dutch East Indies" in the February 10, 1930, issue of THE RUBBER AGE, accurately predicted the rise in importance of native growers in these islands. (EDITOR)

AMSTERDAM, April 28.

THE CONSISTENT strength that has obtained in the rubber market the last few weeks, due chiefly to the expected announcement that the leading producing countries would sign an agreement, has finally proved to have true foundation, and that which was once a mere rumor, with dispatches ranging from sanguinary to critical reports, now has become a *fait accompli*. The Rubber Restriction Scheme, this time not of England alone, with the Dutch sitting on the fence, as they did so well in 1925, has been signed. And buyers in this Amsterdam market extend their commitments with great aggressiveness, in the crude, while the rest of the world is following suit.

Here, in Amsterdam, the first impression one gets is that the plan, which I shall cover in detail, has managed to steer straight of the many difficulties that have, at times, threatened to shipwreck its very purpose. It protects, with admirable skill, not only the interests of the consumers but also endeavors to open perspectives for the important general recovery of the rubber industry, while it promises to hold in store a period of fair prosperity for the sound producing companies.

And that is the impression that obtained generally everywhere I went in rubber circles in Amsterdam. All seemed pleased; some were elated, others, again, with true Dutch conservatism, beneath a mask of skepticism, showed approval of the plan, yet expressed a definite uncertainty about the scheme, insofar as it relates to detail and application. But of one thing they seemed fairly well in accord —that all rubber producers of some importance have joined the so-called monopolistic scheme.

To French Indo-China certain concessions have been made. One large rubber interest emphasized that this was not to be avoided, yet French Indo-China produces little compared to other rubber-producing communities. To Siam, similar concessions have been made. They are, however, of little importance, and do not hurt the plan a bit.

Another important rubber man seemed decidedly elated about the curtailment, in very short time, of the export of native rubber, such as this writer predicted in an article that appeared in THE RUBBER AGE in 1930, claiming that it was bound to do great harm in this year 1934.

It is as yet considered doubtful if this measure will be instrumental in controlling the market price. And this fear is quite justified, because, let us see what may happen: If the consumption, for instance, keeps on the rise and the production is curtailed, then the quota is to be increased by the International Committee, but there will come a sort of "Kentering" or an air-pocket period between the inception of the inauguration of the time of the higher quota and the period when it goes into effect. There will always be a short period, and in this period speculative forces may drive the price up above the level consistent with the statistical position. A lever may be directed at or a buffer may be exerted to temper the speculation by keeping a close tab on the accumulated stocks with producing companies and merchants. And then there is another important factor that differentiates this scheme from that of Stevenson, and that is, that it does not aim primarily at higher figures. In his scheme the aim is especially for curtailment of production and this makes for a higher market.

There exists in Amsterdam a great uncertainty as to the fixing of the first quota. This quota one judges to be 30-35 per cent. As for the length of the period, it is to be in force for at least six months. Now, from what I have been able to gather, and from a conversation I had with one influential authority, the Netherlands East Indies are all set to put the plan into practice. And all that the machinery now needs to start it revolving is a proper ordinance by the government. So the trade here needs a speedily arranged ordinance, so that no time is lost in setting rubber on its road to recovery.

Optimism for Future Is General

As to how this ordinance shall be arranged: First of all, one expects it to regulate and control the export by an excise or export duty on native rubber, and moreover, by a licensing system for the estates. It should also regulate and equalize the export of both groups, as I have been informed, on a basis of 3 to 2. And what is most important, it will thoroughly control the stocks of the estates.

There is no gainsaying that the first impression here in Amsterdam, where, after all, most of the rubber grown in the East Indies is controlled, is one of decided optimism

for the future of the industry. Although the prospect of eventual restriction has been discounted somewhat by the rise in the price of rubber, to give an idea as to the fluctuations, the following table, showing prices for plantation ribbed smoked sheets, might be of interest:

January, 1913	$1.12
January, 1920	.55
January, 1926	.84
October, 1926	.42¾
January, 1932	.04⅝
January, 1933	.02 15/16
July, 1933	.08¾
October, 1933	.07
January, 1934	.09
April, 1934	.12 3/10

And at this last quoted figure of 12.3c most plantations will be able to cover all costs and depreciation.

The contention prevails here, too, that while most estates may still be heavily indebted to bankers, now with the rising cost price that every one expects, the bankers naturally will be more lenient and begin to sing another tune. (Whereas five years ago I urged American interests to buy plantations in the East Indies, that could have been had at a song, with the way things are going now, no such opportunity will again present itself.) That for the next few weeks we shall see rather stiff speculative activity, there is no doubt.

And now let us dissect this Rubber Scheme in its entirety, which, together with tables and expert figures, should present a fairly composite picture. This Rubber Restriction Scheme was signed a few hours ago; to be exact, this very morning of Saturday, April 28th, at the office of the Rubber Growers Association, and it has been handed to the various governments for proper legislation—although it was fully expected that the various governments had already been consulted and had agreed to its adoption.

The Purposes of the Plan

At the outset, let me state the purpose of the Plan, as follows: It has been found necessary to take steps to regulate production and export of rubber from the producing countries, with the purpose of reducing world stocks to a normal quantity to equalize offering and demand and for the maintenance of an equalized price that shall be profitable for sound producers. It shall embrace a large territory, consisting of the following countries: Malaya, Netherlands Indies, Ceylon, India (Burma), French Indo-China, British North Borneo, Sarawak and Siam. It comprises the major portion of a well-organized estate, as well as the native holdings.

In order to regulate, from time to time, the quantities that may be exported from the above-mentioned countries, the following basic quotas have been arrived at:

(In 1,000 Tons)

	1934	*1935*	*1936*	*1937*	*1938*
Malaya	504	538	569	589	602
Netherlands Indies	352	400	443	467	485
Ceylon	77.5	79	80	81	82.5
India	6.85	8.25	9	9	9.25
Burma	5.15	6.75	8	9	9.25
British North Borneo	12	13	14	15.5	16.5
Sarawak	24	28	30	31.5	32
Siam	15	15	15	15	15

It is also prohibited to plant rubber (except for experimental purposes and then only for ¼ per cent of the total acreage of a plantation) and so preclude increases in acreage that would follow as a result of the higher price. And similarly, re-planting is prohibited to the extent of 20 per cent of the acreage, thus giving sufficient assurance of the reduction in capacity and output. It is also forbidden to export plant material from the countries aforementioned, so as to discourage the extension of larger planting areas. Producers and merchants are obliged to keep their stocks within a normal percentage of their turnover.

There shall operate an International Committee, known as the International Rubber Regulating Committee, composed of delegates nominated by the respective governments of the signatories. Each delegate shall have one vote for each thousand tons of the quota of the acreage he represents. The principal duty of this I.R.R.C. is to set down, from time to time, the percentage of the basic quota that the acreages may export.

Advice of Consumers Is Asked

Representatives of the rubber factories in Europe and America are invited to form a Commission to give to the I.R.R.C., from time to time as conditions may warrant, advice about export percentages, stocks, etc., to be planted.

During the restriction period 31,000 acres are allotted to Siam. French Indo-China only exported one-fourth of the amount that France consumed; therefore, special concesisons as to export have been made to French Indo-China. All governments (excepting Siam and Serawak) shall institute a rubber excise duty on exports, which will be used to defray the cost of finding new outlets for rubber. The plan itself starts on June 1, 1934, and extends to December 31, 1938.

That the acceptance of the restriction scheme was welcomed especially by planters needs no further comment, because the last four years the price of first plantation rubber was about 6.7c per lb., which figure made it absolutely impossible for producers to defray the wages of coolies, to make allowances for depreciation and improvements, and what is always so important, to set aside a certain amount for profit on the amount invested. Besides, the means of livelihood of large numbers of Eastern peoples, in their suffering from economic repercussions, decreased, and the salaries of white-collar employees came down, while the low state of affairs also hurt the standing and weakened the structure of the respective governments.

As to the general support of respective countries, the quotas that have been set for the signatories to the plan, are, in reality, the gauge or barometer of their potential production capacity. For the year 1934, therefore, it is set at 1,019,010 tons.

Representatives of committees in London and Amsterdam, and in the rubber-producing countries, have for a long time had under consideration the International Agreement and throughout their negotiations not one dissenting voice has ever been heard (quite naturally so, since all countries were in such a state of depression that they welcomed any method that would lift them out of the dirge).

Only Minor Details Are Criticized

Criticisms have already been directed against the Plan, although mostly against minor details and not against the Plan as a whole. What seems to please all concerned is that rubber will at last be produced again at prices profitable to producers. The Plan does not lay down the percentage of restriction or the price on which the exported quantity is to be based. All this is left to the International Committee, whose course of action will be identical to the one pursued by the Tin Regulation Committee.

With regard to the native rubber production of the Netherlands East Indies, no fixed plan of action has as yet been arrived at. One expects, however, that the exportation of native rubber shall be regulated by means of a tax, yet the fact that this information is lacking would seem to imply that the Netherlands East Indies authorities have a thorough regulation of this portion of the rubber trade under contemplation.

It is generally expected that once the excitement and the

(Continued on page 80)

Rubber Increases the Efficiency Of Streamlined Railway Trains

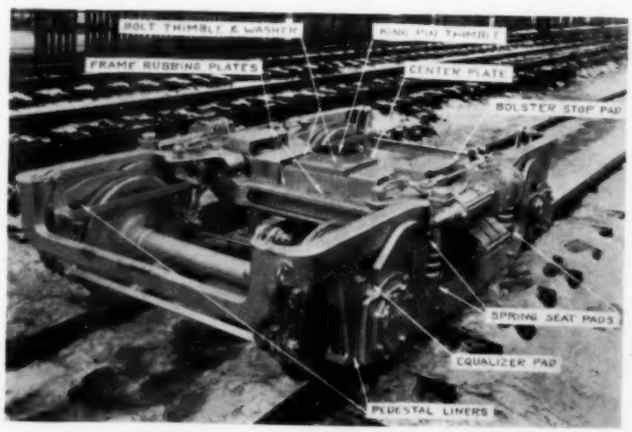
Silence and Smoothness in Operation Are Gained By the Lavish Application of Rubber Cushioning

PUBLIC attention has been drawn in recent months to the new streamlined trains to be placed in operation by two leading western railroads in an attempt to improve efficiency and regain business. In the construction of each of these trains, rubber company engineers were called upon to co-operate with the builder and rubber plays an important part in permitting high speed with smoothness and quiet.

The Zephyr is a self-propelled, three-car, articulated high-speed train of light-weight stainless steel construction designed for the Chicago, Burlington & Quincy by the Edward G. Budd Manufacturing Company, Philadelphia, Pa. The M-10,000 is a three-car train of similar type, driven by a 600 H. P. distillate-burning engine, and produced for the Union Pacific by the Pullman Car & Manufacturing Corporation, Chicago, Ill.

Rubber is employed lavishly in both trains for insulation against shock and noise and for customary uses in belts, hose, packing, mats and other mechanical applications.

Of particular interest in the construction of the trucks of the Burlington Zephyr is the extensive use of rubber insulation to prevent the transmission of sound and other high-frequency vibrations to the car bodies. In each of the four-wheel trucks under the Zephyr, shocks are absorbed by rubber cushions at thirty-two points. There are inserts under the center plate, in both top and bottom equalizer spring seats and between the ends of the equalizers and journal boxes. Rubber liners in the pedestals are faced with Oilite metal plates, vulcanized on, which serve as bearing surfaces for the faces and flanges of the boxes. The bolster pads, which insulate the bolster from the truck frame, are also faced with Oilite metal. In addition to the pad under the center plate, rubber thimbles are provided around the king pin and the center-plate bolts, the latter also including washers. A further precaution against unnecessary noise is the provision of automobile brake lining wherever the members of the truck brake rigging are likely to rub.



The Zephyr Rides on Rubber

Rubber is used lavishly for cushioning purposes on each of the four-wheel trucks of the Burlington Zephyr. Its use also lessens noise

Power for propulsion of this train originates in a Winton 600 H. P. high-compression Diesel-electric engine, designed for speeds of approximately 110 miles an hour. Power for all auxiliaries, whether driven directly or indirectly, is taken from the engine in excess of its rated output of 600 H. P. at 750 r.p.m. A shaft extension is provided at the exciter end of the main generator to drive through V-belts a 25-kilowatt auxiliary generator mounted above the main generator. The opposite end of the auxiliary generator shaft is also extended for V-belt connections to the two fans which draw air into the engine room.

All doors, when closed, form unbroken surfaces with the outside sheathing of the car, and vestibule passages between the car bodies are enclosed by diaphragms bolted to the ends of the cars. These accordion type diaphragms are attached between the ends of adjoining cars in order to provide continuity of the outer surfaces.

Several rubber manufacturers co-operated in providing rubber equipment for the Burlington Zephyr. A partial list of these sources of supply includes rubber insulation by the United States Rubber Company, New York, N. Y.; rubber bumpers by the Quaker City Rubber Company, Philadelphia, Pa.; V-belts by the Dayton Rubber Manufacturing Company, Dayton, Ohio, and miscellaneous rubber

RUBBER CUSHIONED PARTS REQUIRED ON EACH TRUCK OF THE ZEPHYR

Description	*Tr. 1*	*Tr. 2*	*Tr. 3*	*Tr. 4*
Pedestal Liner	..	8	8	8
Bolster Center Plate Bearing Pad	..	1	1	1
Bolster Stop Pad	2	2	2	2
Frame Rubbing Plate	..	4	4	4
Center Plate Bolt Thimble	..	4	4	4
Center Plate Bolt Washer	..	4	4	4
King Pin Thimble	..	2	2	..
Equalizer Spring Seat Bearing Pad	8	8	8	8
Equalizer Box Bearing Pad	4	4	4	4
Side Bearing	..	4	4	2
Hand Brake Equalizer Roller	2	..	..	..
Total	16	41	41	37

parts by the B. F. Goodrich Company, Akron, Ohio; the Dryden Rubber Company, Chicago, Ill., and the Continental Rubber Works, Erie, Pa.

The three cars in the new $200,000 Union Pacific aluminum train, articulated as one huge tube, weigh altogether only 85 tons, or about as much as one ordinary Pullman sleeper. It requires only 500 of its available 600 H. P. to drive 116 passengers, crew and 25,000 pounds of mail and baggage at 90 miles per hour for 1,200 miles, the capacity of its fuel tanks. Ordinary trains carry only enough coal to run 100 miles.

Union Pacific Train Is Rubber Cushioned

Rubber cushioning also features the truck construction on this train. Heavy ring form rubbers are applied between wing castings and the truck frame with sufficient compression so that the rubber has capacity in shear to take its part in supporting the load on the truck. Rubber bushings take care of extreme lateral forces. Rubber pads are used for the mounting of oil coil springs to soften shocks and avoid metallic contacts.

Rubber vestibule sheets, rigidly attached, are used between car sections to preserve the streamlined effect. These sheets of pure gum rubber are furnished in appropriate colors to match the color scheme of the train body.

Rubber hose and rubber packing play an important part in the engineering details of both trains. There are, for instance, air pump packing, cabcock packing, canvas pump packing, cloth inserted sheet packing, conveyor packing, cross expansion packing, duck inserted sheet packing, flax packing, high pressure packings, high pressure diagonal packings, hydraulic packing, mallet compound packing, reverse gear packing, rod packing, sheet packings, throttle packing and valve steam packing. Vitally important are air, air brake, air signal, car heating, engine, fire, hot water wash-out, locomotive oil burning, oxygen, pneumatic, sand blast, squirt, steam, tender, vacuum and water hose. Other necessary rubber parts include air brake gaskets, axle dynamo belt, elevator belting, friction tape, gauge glass gaskets, rubber matting, rubber pump valves, splicing compounds, transmission belting, valve discs and a variety of molded items.

Other Roads Plan Streamlined Trains

The Union Pacific M-10,000 has been seen by thousands of persons in its present tour of the country. The Burlington Zephyr, introduced to the public at Philadelphia and New York last month, will also be exhibited at principal cities and at the Chicago Century of Progress before being placed in regular service next fall between Kansas City, Omaha and Lincoln. It is understood that the New York, New Haven & Hartford and other railroads have contracted for the construction of similar trains and even the New York City subways will soon have a modified type, which has already been ordered by the Brooklyn-Manhattan Transit Company.

Dipex—Mold Lubricant

DIPEX is a new mold lubricant used in spraying molds during the cure of tires and other rubber goods to prevent sticking of molds. It is soluble in either hot or cold water in all proportions, is non-injurious to the rubber, and has no injurious effect on the workmen during handling.

Its manufacturers suggest either 6 or 8 ounces of Dipex to a gallon of water but this is subject to wide variations in different plants as conditions warrant.

The advantages claimed for Dipex are the small amounts of material used, uniformity in composition, maximum efficiency with minimum material, a saving in cost of coating material and cleanliness.

New Fabric for Fine Overshoes

RUBBER footwear manufacturers are offered for overshoe vamps and uppers a new fabric whose distinctive construction is said to result in better lasting and fitting, better wear and enduring good looks. It is a knitted fabric, not woven, and is the exclusive development of the Barbour Mills, Brockton, Mass. The fabric is being marketed under the name "Barbourdine," trade mark rights to which have been applied for.

A lustrous fast black which holds its brilliancy and will not turn grey or rusty, coupled to its double-fabric construction with a silk and wool face, are features of the product.

Streamlined Train

The Union Pacific M-10,000 can average 90 miles per hour with 116 passengers. It employs rubber in many ways to gain silence and smoothness in operation

Use of Egyptian Cotton in Tire Fabric Hit by Increased Tariff

Imports Now Lower for Egyptian Product Once Popular for Strength, Stretch and Durability

By W. K. SHAW, Jr.
President, E. A. Shaw & Company, Inc.

EGYPTIAN cotton is bought by spinners all over the world primarily for its strength, stretch, and durability. It is bought secondarily because its silkiness lends itself particularly well to mercerization. It is chiefly on account of the first reason that American spinners purchase Egyptian cotton. The bulk of American purchases are made for the manufacture of tire fabric and sewing thread.

Since the imposition of the 7c duty upon importations of cotton of 1⅛ inch and longer staple, in accordance with the Tariff Act of 1930, much less Egyptian cotton has been imported into the United States than formerly. The average seasonal number of bales exported from Egypt to the United States for the period from August 1st, 1923, to August 1st, 1930, was 135,700. For the period from August 1st, 1930, to August 1st, 1933, the average seasonal exports were 34,700. Generally speaking, the thread manufacturers take most of the Sakel importations and the tire trade most of the uppers importations.

It is interesting to note that 8.48 per cent of all Egyptian Sakel exports in the season 1927-28 were shipped to the United States and 8.42 per cent in the season 1932-33.

Transportation Is Not Modernized

. . . in the cotton country of Egypt, where the raw material is brought from the fields by camel just as was done centuries ago

Cotton Field

. . . with native Egyptian workers gathering up the raw cotton

During the intervening seasons, percentages fluctuated widely owing to the tariff anticipatory importations, overstocking, etc., but the average happens to be about 8.40 per cent of the total Sakel exports during these intervening seasons. The yearly exports of Sakel to England last season were 50.96 per cent of total exports, as against 48.14 per cent during the season 1927-28.

These figures might lead one to believe that the actual number of bales of Sakel shipped to the United States last season were the same as in the season 1927-28. Actually Egyptian Sakel shipments last season to the United States were only 63 per cent of the 1927-28 shipments. Total Sakel exports from Egypt decreased correspondingly.

In the case of England, part of this decline in Sakel importations was offset by the fact that English spinners purchased twice as large a quantity of special Egyptian growths last season as in the season 1927-28, whereas American spinners did not materially increase their takings of these special substitute growths. France increased her purchases of these special growths nearly 200 per cent. These figures are mentioned because they indicate that American spinners are taking about the same share of the Sakel crop now as they did prior to the tariff, although they are taking fewer bales, but they are not taking advantage of the new Egyptian growths such as Guiza 7, Sakha 4, Fouadi and Maarad which are substituted by foreign spinners for some Sakel work.

Importations of uppers, under the penalty of the 7c tariff, have fared much worse. In the season 1927-28 United States imported about 20 per cent of all uppers exported and last season 3.40 per cent. The quantity in bales amounted last season to only 18 per cent of that imported in the previous mentioned season.

England last season, while importing a trifle smaller percentage of the total exports, actually imported slightly

Egyptian Workers Ginning Cotton

The Egyptian product is still employed extensively in the manufacture of certain high quality automobile casings by American factories

more in bales than in the season 1927-28. Germany imported more than twice as much, and France almost twice as much.

Roughly speaking, it would, therefore, seem apparent that the tire trade had been much worse hit by the 7c tariff than the thread and fine goods manufacturers; or, rather, that the latter, finding no suitable domestic substitute for Egyptian Sakel, had been obliged to continue importing it, whereas the former group had more successfully substituted American cotton for uppers. To determine accurately which group have been most successful in substituting American cotton for their respective requirements of Egyptian cotton, it would be necessary to have definite information as to how much the production of those qualities of thread and tire fabric which in 1927-28 were made of Egyptian cotton had declined or increased in the season 1932-33.

Statistics of the Industry

Of interest are the following cabled statistics received from Alexandria last month:

ESTIMATE OF ACREAGE OF COMING CROP

Uppers Zagora	1,200,000 acres
Sakel	500,000 acres
Guiza 7	300,000 acres
Maarad	70,000 acres
Sundries	230,000 acres
Total	2,300,000 acres

In an Egyptian Cotton Plant

Strength, stretch and durability are the characteristics that make Egyptian cotton sought by spinners in all parts of the world

WORLD CONSUMPTION

	to date, 1934	*to same date, 1933*
Sakel	1,467,000 cantars	1,200,000 cantars
Achmouni Zagora	3,908,000 cantars	2,128,000 cantars
Guiza 7	206,000 cantars	100,000 cantars
Sundries	596,000 cantars	280,000 cantars

WORLD STOCKS INCLUDING ALEXANDRIA, INTERIOR AND FOREIGN CONSUMING CENTERS

	current figures, 1934	*against 1933*
Sakel	1,257,000 cantars	2,026,000 cantars
Achmouni Zagora	4,133,000 cantars	3,016,000 cantars
Guiza 7	215,000 cantars	110,000 cantars
Sundries	920,000 cantars	450,000 cantars

Opinion: If Egyptian maintains same parity with American cotton consumption, Egyptians will continue remainder season, notwithstanding expected large new crop.

By mail the following report of cotton seed accepted by the Egyptian Government for sowing purposes up to March 1st, 1934, and the amount accepted up to the same date during the preceding season:

	1934-35	*1933-34*
Achmouni and Zagora	Ards. 692,000	Ards. 478,000
Sakel	Ards. 273,000	Ards. 211,000
Guiza 7	Ards. 161,000	Ards. 46,000
Maarad	Ards. 41,000	Ards. 46,000
Sakha 4	Ards. 35,000	Ards. 36,000
Fouadi	Ards. 25,000	Ards. 22,000
Nahda	Ards. 23,000	Ards. 19,000
Guiza 19	Ards. 8,000	Ards. 660
Guiza 3	Ards. 6,800	Ards. 2,400
Pilion	Ards. 7,100	Ards. 10,800
Casulli	Ards. 3,200	Ards. 2,600
Others	Ards. 5,700	Ards. 4,300
Total	Ards. 1,285,000	Ards. 881,500

Talc in the Rubber Industry

STRICTLY speaking, talc and soapstone are hydrated silicates of magnesium in varying proportions. Talc, in commercial quantities, occurs only in areas of highly crystalline schists and other regional metamorphic rocks. The commercial deposits are confined chiefly to the Appalachian Mountain areas of the Atlantic states from New York to Georgia and to the mountainous belt of the Pacific Coast, notably in California and Washington.

The uses of talc are determined largely by its physical properties. Thus, its colloidal nature and its high retention make it valuable as a paper filler. It is also used as a filler in paint and other products. Its soapy feel and absence of grit render it peculiarly adaptable to the manufacture of toilet powders and cosmetics. Talc is employed commercially in many ways, but because of inherent differences in physical and chemical properties material from all deposits can not be applied equally to all uses.

Ground talc is used extensively as a filler in paint, paper, rubber, textiles and various other products. It is also employed for foundry facings, lubricants, and various toilet preparations, in ceramics and in glass making, and also as a polishing agent. Large quantities of low grade talc are used in the manufacture of composition roofing. Off-color talc is consumed in increasing amounts for rock-dusting coal mines.

Certain grades of talc, because of their electrical resisttance, and remarkable property of hardening under heat treatment, are used in the manufacture of electrical fittings, as bushings, blocks, tubes, disks, etc., and are sold under the trade name of Lava Products. Massive talc is also used in the manufacture of crayons and pencils. Of the total talc output, 95 per cent is sold in pulverized form.

In 1931 there were 163,752 short tons, valued at $1,852,472, produced in the United States. More than half of the value of the talc mined in 1931 was produced in the state of New York.

Butterfly Wings Serve as Motifs For Designs for Rubber Apparel

Artistic Adaptation Used in the Styling of Fashionable Raincapes and Raincoats for Women

By GEORGE RICE

MAKING designs on ladies' rubber capes and coats more attractive to increase the popularity of rainwear is being accomplished by the clever use of motifs and colorings suggested by butterfly wings, bird plumage, flowers and vines. Progress is especialy being made in modernistic design on rubberized street apparel for women and girls with butterfly motifs. These beautiful rainbows of the air are to be found in nearly all parts of this country during the summer and fall flitting from flower to flower in the gardens, or sailing over the fields during harvesting. They can be caught along the roadside by one who carries a net in his car; or the best specimens can be purchased alive or lifeless from dealers in insects. I recently visited a dealer in San Diego, Calif., who buys and sells butterflies for collections and for use as motifs by artisans engaged in design work. Richly hued butterflies with a wing spread of nearly three inches are sold for a dollar or more each, while many of the plain variety have a market value of but a few cents.

In some cases the design consists wholly of a number of butterflies arranged at intervals on the surface of the fabric with all of their natural hues and tints faithfully reproduced. A ground color is used which harmonizes or contrasts with the colors of the butterflies according to what is desired. Usually, however, the pattern is improved in appearance and given a more finished aspect by the introduction of flowers, leaves, petals or other natural effects into the spaces between the butterflies.

The design is executed on the regular squared and lined paper with crayons, oil or water colors as shown in the accompanying drawings. The design thus created on paper becomes the model for the engravers in the mill where the fabric is printed by means of engraved rollers and colored pastes. There are some hand-painted designs of this type,

The Motif The Design

FIG. 2—The rich blue wing striping of the tiger butterfly is particularly effective in the creation of artistic designs

The Motif The Design

FIG. 1—The winged creaures of the air make excellent motifs for novel designs on women's raincoats and capes

and others in which the butterfly motifs are produced in single colors by means of a spray-gun and a stencil with cut-outs. The motifs can also be woven on the surface of the rubberized fabric in all of their varied colors if a jacquard loom is used.

Apparently changing a color or a shade of a butterfly in an effort to make it appear more beautiful in a design is wasted effort. Nature is always harmonious and we may err in striving for a better harmony of color by altering the tints as they appear under nature's laws. But the idealized modes of presenting nature have changed somewhat in recent times, with the result that some of the long-established color laws have to be violated to make the decorated goods salable. In the reproduction of a butterfly motif on a design like that shown at the right in figure 1, we may, for instance, base the design on the principles of nature without actually copying nature, providing the commercial or artistic value of the design will be improved by such act. In a way, it is a matter of the simultaneous contrast of the colors in the design. The winged creatures as a rule are naturally hued and tinted with colors that harmonize well with the colors of the flowers and the grasses of the fields they fly about in. A fashionable rain cape may have a ground color which requires that all objects in the designs on its surface be specially tinted. The natural hues of the butterfly may not do.

This principle is what might be called a requisite of modern design on rainwear or any kind of wear on which ornamentation is used for beautifying purposes. If a color plot developed in orange, red, green, black and gold will appeal better than one using only the natural colors of the motif, the designer is very likely to use the former.

The rich greenish-blue of the fore and aft wings of the

(Continued on Page 79)

Congress Passes Bankhead Bill To Restrict Cotton Production

Roosevelt Signs Measure Designed to Limit 1934 Crop to a Total of 10,000,000 Bales

THE Bankhead Bill for compulsory restriction of cotton production was signed by President Roosevelt on April 21, launching the country for the first time on a program of forced control of agricultural output through the use of the federal taxing power. Inasmuch as cotton is second only to crude rubber itself as a raw material in tires and numerous other rubber manufactures, this attempt to limit the 1934 crop to 10,000,000 bales will have a far-reaching effect upon the rubber industry.

The Bankhead measure puts in legislative form the principle of the reduction agreement entered into last year when the farmers plowed up 25 per cent of their crop. So well pleased were they with the result of this plan that, anticipating the passage of the Bankhead measure, they signed an agreement to cut this year's acreage 40 per cent below the five-year average previous to 1933.

This program is expected to reduce the carry-over to 5,000,000 bales, a normal figure, which compares with 13,000,000 bales in 1932, and the reduction is expected to force the price of the 1934 crop to 15 cents.

Following the 1933 curtailment the price rose to more than 12 cents, and brought the South the first prosperity it has seen in four years. A new cotton crop at 15 cents would, it is believed, put the cotton farmer squarely on his feet.

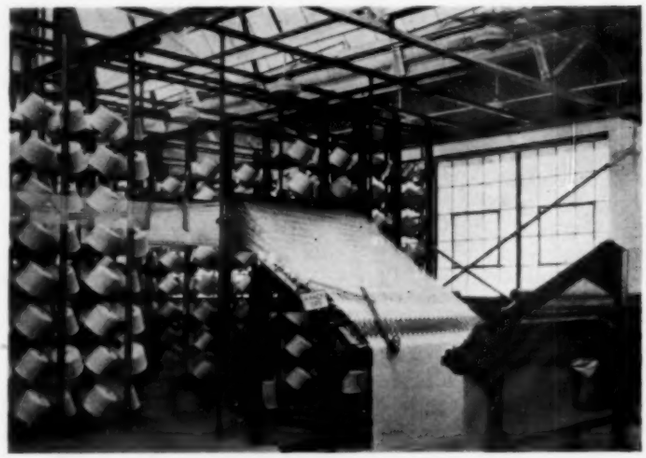
For years the growers had tried to bring about an agreement for the reduction of their cotton acreage. Governors of Southern States had held solemn conferences to no avail. Farmers' associations, co-operative bodies, had been organized but got nowhere. Cotton until recently was left to the mercy of supply and demand, subject to an up-and-down swing in price. This had ranged from 5 cents a pound 100 years ago to $1 during the Civil War, 42 cents during the World War and back to the century-old price of 5 cents in 1932.

The act limits to 10,000,000 bales of 500 pounds net weight each the quantity of cotton which may be harvested during the crop year 1934-35 and marketed exempt from the payment of the tax. The measure further provides that no State which has produced as much as 250,000 bales in any year during the base period shall be given an allotment of less than 200,000 bales.

This provision applies only to Missouri and California.

The remaining 9,600,000 bales will be allotted to the other cotton-producing States on the basis of the percentage that the average production of each State for the five years, 1928-32 inclusive, is of the total production of all States during that period.

The terms of the Bankhead bill are much simpler in effect than last year's plan. Moreover, the bill has teeth. The objection to the cotton scheme offered most frequently and most effectively was this: The government tells the farmer to reduce his acreage, thus raising the price of cotton. Other farmers not so pledged, or new farmers, rush into the business, plant large crops and increase production.



This contingency is taken care of in the Bankhead act. Each State has its allotment. The States in turn delegate the administration of the allotments to the counties, which act through committees. An average production of cotton on each farm for five years up to 1933 is figured. Approximately 40 per cent is taken off and the farmers are permitted to raise the rest. There is no prohibition against farmers planting more than their allotments. But if they gin, the excess will be taxed 50 per cent of its market value, which makes the business unprofitable.

The acreage surrendered by the farmer is leased by the government. The money for this is provided by the processing tax, as under the old arrangement. The farmer may plant this land in any crop he wishes, provided it is not a commercial crop.

The reduction entailed by the quota of 10,000,000 bales is about 41 per cent of the base production of the past five years. Contracting producers have agreed to a curtailment averaging 38 per cent in the sign-up campaign just closed. In that campaign producers agreed to retire 15,350,000 acres from cotton production for the coming season.

The act places upon the Bureau of Internal Revenue the duty of collecting the 50 per cent tax on cotton which has no exemption certificate.

The President's statement was as follows:

"I am advised that the overwhelming majority of the South's cotton producers desire the enactment of legislation now embodied in the Bankhead bill. It aims to prevent that very small minority which has refused to co-operate with their neighbors and the government from impairing

the effectiveness of the current cotton program, which now includes 92 per cent of the cotton acreage.

"There is nothing new in the sentiment which has resulted in the passage of the Bankhead bill. During the days of the Confederacy methods to adjust cotton production were advocated. Again in 1905, 1915, 1921 and 1927 widespread sentiment was developed for some plan that would prevent the recurring accumulation of cotton surpluses from dragging prices to starvation levels.

"The cotton States have found it impossible to act independently or in unison to achieve this end. They have asked for the use of federal powers. A democratic government has consented. The sponsors of the Bankhead bill say it will not supplant but will supplement and make even more effective the present adjustment program.

"It is the purpose to make certain that the splendid progress already made is consolidated into enduring benefits. The objective of the bill is to place the cotton-growing industry on a sound financial and economic basis. I hope our progress already made toward this objective will be facilitated by this legislation."

Approval Is Not Unanimous

Sentiment has not been unanimous in favor of the measure, even in the cotton growing States. J. W. Garrow, president of the American Cotton Shippers Association, denounced the bill as dangerous to the entire farming industry. "With American crops announced and priced in advance," he said, "there will be an increased impetus to the foreign production of cotton."

The New York *Times* characterized the statement of the President on the bill as lacking the usual enthusiasm of his pronouncements and declared, "Even less enthusiastic than the President were officials of the AAA, who face the task of carrying the measure into effect. Secretary Wallace had characterized the idea involved as 'abhorrent to us' and once remarked that he had his 'fingers crossed' as to its administration."

World Stocks Have Declined

The world stock of American cotton on March 31 was approximately 14,981,000 bales, as compared with 16,679,000 at the end of March last year, and 17,273,000 two years ago. The stock on plantations in the South was the smallest in several years, totaling 1,333,000 bales, as against 2,443,000 a year ago, and 2,418,000 two years ago. The stock of American cotton in public warehouses in the United States and afloat to and at ports of Europe and the Orient was also the smallest in several years, aggregating 10,572,000 bales, compared with 11,731,000 last year, and 11,842,000 two years ago. The stock of American cotton at world mills was the largest end-March world mill stock since 1927, totaling 3,076,000 bales, as against 2,505,000 last year, and 3,013,000 two years ago.

Blending Rubber Compounds and Resins

LOW MELTING point resins may be satisfactorily blended with rubber compounds on the mixing mill either by adding separately after the rubber is well broken down or by mixing them in with the other compounding ingredients. High melting point resins, on the other hand, should be added to the unmasticated crude rubber as soon as it starts sheeting on the front roll of the mill. By this procedure the rubber, which is relatively hard, tends to break up the resin particles and disperse them uniformly through the rubber. In some cases, it may be necessary to heat the mill rolls with steam to insure perfect dispersion. —*R. R. Olin Laboratories, Akron, Ohio.*

Butterfly Designs for Rubber Apparel

(Continued from page 77)

tiger butterfly, dotted with multi-colored spots and streaks, make these butterflies useful motifs for designs on rain garments intended for persons of aesthetic tastes. A peculiarity of this species is that it takes on colors that blend with its surroundings. The ground color, therefore, varies accordingly. A sketching of the wing-striping is shown at the left in figure 2 and at the right a suggested design.

The nature of the material on which the motifs and

The Motif The Design

FIG. 3—The zebra striped butterfly, noted for its versatile colorings, is an apt subject for inspiration for smart rubber apparel designs

colors are to be placed has to be considered. Whereas the best types of rainwear for women are silk-faced, some are cotton. The natural luminosity of the silk or rayon texture heightens the tone of the colors, resulting in increased brightness as compared with the more subdued cotton texture. Silk and most of the artificial silks possess a high order of reflecting powers, while cotton and linen are absorptive and do not heighten the colors dyed or printed upon their woven or knitted surfaces.

Some of the best effects we have seen are produced without any effort to give the butterflies a land-setting consisting of green grasses or violet or other colored flowers.

The background is made up entirely of a pale blue sky with the butterflies skimming about on it in various directions. An effect of some attraction is also produced by introducing a few motifs chosen from bird life.

The zebra striped butterfly, noted for its versatile colorings, is a fairly good workable subject for rubber apparel designs. This winged creature is given zebra-like stripes on its wings, the colors of which vary, but ordinarily tend to yellow on a ground containing two or more shades of brown, purple, pink and light blue. Even the body of the zebra butterfly carries several hues on its fuzzy surface. The artisan is thus given a variety of color inspirations when working with these butterflies as models. The injection of one or more geometric effects into the spaces between the butterfly motifs frequently improves the design in the manner shown in figure 3.

The problem of using two or more colors in a design on rainwear is complicated because of the fact that white cannot be used as a ground as in the case of most lines of dress goods. The average rain garment is colored. Considerable red, green and blue are essential to butterfly designs, and combinations of this kind could be made to appear better by separating the colors with white.

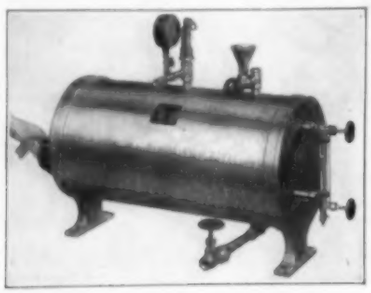
But white cannot be used very much on apparel which is intended to be subjected to rain, grime and the settlings of stormy weather. So we have to resort chiefly to such combinations as purple, yellow and greenish-blue, or red, yellow and violet, or blends which will present a satisfactory appearance without the intervening white areas.

New Equipment

Miniature Steam Generator

FOR PRODUCING small quantities of steam at pressures from 1 to 300 lbs. in manufacturing processes or laboratory research, the Commonwealth Electric & Manufacturing Company, 83 Boston Street, Boston, Mass., is introducing its new Comm-O-Lectric electric-heated miniature steam generators. These boilers are offered in nine stock sizes, with capacities from 2 to 18 kilowatts, equivalent to 6 to 54 lbs. of steam by weight generated per hour.

In rubber laboratories and for small-scale operation,



these new high-pressure steam generators are suited to meet exacting conditions. Their use enables many plants to shut down large main heating boilers during the summer season.

Stanley Speed Variator

DESIGNED to be a variable speed constant horsepower device combining sensitiveness with strength and high efficiency with low maintenance cost, the Stanley Speed

Variator is offered by the Merritt Engineering & Sales Company, Inc., Lockport, N. Y. It utilizes the principle of roller traction and gives an infinite number of speeds within a given range.

A built-in motor forms part of all types, while certain models contain, in addition to the motor, speed reduction gearing adapting the output shaft to the same range in lower speeds. This speed variator is offered in units of 2 horsepower capacity up to 20 horsepower. The standard types have a speed range of 3 to 1, while special units capable of a maximum speed range of 9 to 1 with constant horsepower output are also available.

Dutch Interests Elated Over Restriction

(Continued from page 72)

flurries of the rise in price have abated somewhat, and which phenomena are always to be expected after such a momentous undertaking, the prices shall remain stationary, much to the concern and chagrin of the men of the street who would rather had seen a runaway market.

And now, in conclusion, I would say a few words more about the plan insofar as it has affected the huge Netherlands interests. Netherlands India, in contrast to the time when the Stevenson restriction scheme went into effect, now is heart and soul in favor of restriction. The British Empire, which in 1933 produced nearly twice as much rubber as the Netherlands East Indies, may produce in 1936, according to the present setup, sixty per cent of the total rubber production. In 1936, the Malay States will have more than 100 per cent of the estimated potential production, whereas for Netherlands India the percentage may only be 65 to 70. And this means that full cognizance is given to the extensive native rubber holdings in the Netherlands East Indies.

At the moment of this writing I have just obtained the advance figures of the Netherlands Indies export for March, 1934, which read as follows:

	(In tons) *March 1934*	*Feb. 1934*	*March 1933*
Outer Possessions	37,835	28,527	13,581
For Java	8,799	6,815	5,178

From this table it becomes evident that Java has taken an important place in rubber production—and from this also follows that plantations that have lain foul have been opened up again, while the sharp rise in the outer possessions indicates a tremendous native rubber production.

The increase in the total export for February was 11,292 tons, or 32 per cent, whereas for the month of March, 1933, it was 27,875 tons, or 148 per cent. The export figures were:

1st quarter, 1933	52,219 tons
2nd quarter, 1933	76,419 tons
3rd quarter, 1933	93,602 tons
4th quarter, 1933	100,304 tons
1st quarter, 1934	116,060 tons

April undoubtedly will show additional record figures, so that the export production of the Netherlands East Indies will reach a total of 600,000 tons yearly (a prediction that I made in my article which appeared in THE RUBBER AGE in 1930).

And thus the rubber industry is embarking on its second attempt at rubber restriction, this time under more favorable conditions, since Holland, which in 1925 was sitting on the fence and was profiting from the rise, has joined hands with Great Britain and will control the output and share in the general improvement.

And so it is that leading rubber men that I interviewed here in Amsterdam seemed fairly elated with the way things have turned out, while they feel that success, in a large measure, will depend on the movements in the American automobile industry and on the stocks of rubber that are held in America.

It is safe to predict a steady but conservative rise in the price of rubber, so that it may reach 24c a pound. When that will be depends entirely on the smooth running of the restriction scheme.

REVIEW SHELF

• Monthly Review of New Books, Pamphlets, Company Catalogs, Service Bulletins, House Organs, etc., Pertinent to the Industry.

THE WORLD RUBBER POSITION. Published by Economic Associates, 200 Hudson Street, New York, N. Y. Chart. 1934. $1.

Dominant factors in the statistical history of crude rubber for the past 21 years have been plotted on a chart which gives them coordination. The upper section is devoted to production and carryover, the mid-section to prices and events which aided in establishing values, and the bottom section to consumption.

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BANBURY MIXERS: Bulletin No. 171. Published by the Farrel-Birmingham Company, Inc., Ansonia, Conn. 32 pp. 1934. For free distribution.

The expansion of the rubber industry, with the consequent necessity for increasing production and the desire for mass mixing methods, led to the development of modern mixer equipment. The two main objects sought—higher output at reduced cost and control of uniformity and quality—depend upon elimination of the human element and the productivity and precision of the mechanism. This brochure demonstrates graphically with typical records of performance what improvements are possible with up-to-date equipment.

•

INDICATING AND RECORDING GAUGES. Published by Ashcroft American Gauge Division, Consolidated Ashcroft Hancock Company, Bridgeport, Conn. 32 pp. 1934. Free.

DRAWN CASE GAUGES. Published by Ashcroft American Gauge Division, Consolidated Ashcroft Hancock Company, Bridgeport, Conn. 8 pp. 1934. Free.

Modern plants using high pressures and temperatures require accurate gauges as a vital part of their equipment. Gauges in cast iron and cast brass cases are described in one of these catalogues, while the other shows gauges in drawn steel and drawn brass cases with either brass movements or phosphor bronze movements.

•

BROWN RESISTANCE THERMOMETERS. Published by the Brown Instrument Company, Philadelphia, Pa. 32 pp. 1934. For free distribution.

The resistance thermometer utilizes the principle involving that property which most electrical conductors possess of changing their electrical resistance with variations in temperature. All metals except certain alloys have this characteristic, and such changes in resistance may be measured in electrical units and automatically converted so as to be indicated or recorded directly in degrees Fahrenheit or Centigrade. These thermometers will measure temperatures from —300° to +1000°F.

•

THE MODERN CONTROLLER FOR TEMPERATURE AND PRESSURE. Published by the Foxboro Company, Foxboro, Mass. 4 pp. 1934. For free distribution.

There is no quicker and no cheaper method of saving wasted steam, effort and time than through the use of instrument control. Such control is described with graphic illustrations in the pages of this folder.

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60% WIRE JACKET STOCK. Laboratory Report No. 170. Published by Rubber Chemicals Division, E. I. du Pont de Nemours & Company, Wilmington, Del. 4 pp. 1934. For free distribution.

ACRIN SUPER-AGING 30% DRY MINERAL WIRE INSULATION. Laboratory Report No. 172. Published by Rubber Chemicals Division, E. I. duPont de Nemours & Company, Wilmington, Del. 2 pp. 1934. For free distribution.

In each of these reports, compounds employing Acrin, the new accelerator developed by the company, are discussed. The performance of these compounds in oxygen bomb tests is described in detail.

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GIVAUDANIAN. Vol. X. Published by Givaudan Delawanna, Inc., 80 Fifth Avenue, New York, N. Y. 12 pp. April, 1934. For free distribution.

Experiences of manufacturers of raincoats and other rubber products who employed deodorants and of those who did not are contrasted in text and humorous cartoon. Another item in this issue discusses the California poultryman who fed his hens with the guayule rubber plant to produce eggs with more flexible shells.

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BUSINESS DIRECTORIES: A KEY TO THEIR USE. By Marian C. Manley. Published by the Public Library, Newark, N. J. 68 pp. 1934. $2.

A classified list of trade and business directories, this guide covers a wide range and even extends to social and educational agencies whose directories include information valuable to business. In all, 378 business directories are listed and described fully, and they are grouped under ten principal classifications.

•

FALK-RAWSON 4-DUTY COUPLING. Published by the Falk Corporation, Milwaukee, Wis. 4 pp. 1934. For free distribution.

Successful installations of this type of automatic centrifugal clutch coupling are described. New dimensions and revised prices for this line are also included.

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HANDBOOK OF NRA. By Lewis Mayers. Published by Federal Codes, Inc., 32 Union Square, New York City. 868 pp. 1934. $6.50.

The increasingly rapid growth of basic material on the National Recovery Administration has necessitated a manual to coordinate the vast body of executive orders, regulations, administrative rulings and judicial decisions. The codes of 25 major industries are given in full, the remainder in summary form, and an introduction of 50 pages integrates the whole. The volume supersedes a first edition published last September.

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STEAM BY WIRE. Bulletin No. 52A. Published by the Commonwealth Electric & Manufacturing Company, 83 Boston Street, Boston, Mass. 8 pp. 1934. For free distribution.

For small-scale plant operation and for laboratory work, the company has designed a series of small electric-heated steam generators. A typical 5 kilowatt model is illustrated in use at a well known rubber company laboratory, where its automatic pressure control, adjustable at will over 1 to 200 lbs., makes it a significantly versatile piece of laboratory equipment. Larger and smaller models are also described.

Stacol Resin in Improved Form

STACOL, an inorganic water soluble resin which was recently introduced, has now been improved so that even concentrated solutions do not crystallize from water solutions on standing. The Glyco Products Company, Inc., Bush Terminal Building No. 5, Brooklyn, N. Y., maker of the product, announces that technique for improving penetration and spreading in various coatings has been developed. The product is recommended for thickening rubber latex, for the prevention of adhesion of rubber materials, and for "rubless" polish for rubber and linoleum.

Editorial Comment

Restriction Returns to the Rubber World

FOLLOWING five years and seven months of completely free and unrestricted production of crude rubber, the world is once again to experience regulation of plantation output. Instead of the one-sided curtailment of the Stevenson Act, there is proposed a program that will embrace not only British territory but all Dutch possessions and Siam and French Indo-China. Available details indicate that a satisfactory and workable scheme has been drafted, subject, of course, to the limitations of human administration.

Not alone will this international five-year plan control exports from the Middle East, but it also prohibits new planting, restricts replanting, forbids the export of planting materials and drastically limits the extent of planters' and dealers' stocks. If these last provisions are strictly enforced, it is conceivable that the authors of the plan may have in mind the destruction of such illegal surplus stocks; for only in this way could they be effectively removed from the situation.

We are told that the maximum export quotas allotted each territory for every one of the five years represent something more than a mere mathematical computation. They are the outcome of an agreement reached only after protracted negotiations, and the implication is that each country is satisfied with its allotment. We are also told that the exceptions made in the case of French Indo-China will not permit unregulated increase of output in that territory. The French colony is bound, along with other countries, not to extend its planted area; hence, its expansion of production will be limited to the area already planted.

From its surface aspects, therefore, the plan should be eminently practicable, and the representatives of the growers who spent an arduous year in its development are deserving of the thanks of the plantation industry. But judgment can not, of course, be adequately given until the scheme has had opportunity to begin actual operation.

The American manufacturing industry can not quarrel with the declaration that the object of the plan is to obtain equilibrium of world stocks and to "adjust, in an orderly manner, supply to demand and to maintain a fair and equitable price level which will be reasonably remunerative to efficient producers." American manufacturers are perfectly agreeable to seeing the rubber growers receive a price for their commodity that will enable them to operate efficiently and earn just profits, even a price that will permit them to pay generous dividends to shareholders. In return, however, the consuming interests of this and other countries demand two considerations: first, that they be assured of an adequate supply of the commodity, and, second, that the price be not only equitable but reasonably stabilized.

Assurances have been freely given through trade and diplomatic channels to the effect that the interests of consuming countries will be carefully considered. Similar assurances were offered when the Stevenson Plan was enacted. Rubber manufacturers are cordially invited to delegate representatives to meet with the International Rubber Regulation Committee. But these delegates of consuming interests will necessarily function in a purely advisory capacity without the least shadow of authority.

Unquestionably the proof of the plan will be found only in its actual working. The principal result of the Stevenson Act was to lose for British Malaya its supremacy in rubber cultivation and to expand production in the plantations and native areas of the Dutch East Indies. If the present plan is not held within reasonable bounds, it may cause a similar rise of output in South America, Africa and the Philippines. Another effect of British restriction was the tremendous increase in importance of reclaimed rubber and the close approach to the development of a synthetic substitute. Should rubber prices be again sharply raised, reclaim will once more come into its own and the laboratories will work feverishly toward the attainment of a satisfactory artificial product at low cost.

In final analysis, it is impossible to debate the accuracy of the London *Times* in saying, "The economic world thrives, of course, on abundance; scarcity means privation. Therefore the restriction of abundance can never be a question of principle, but only one of temporary expediency." It is to be hoped that the International Committee will be well guided in its ministrations so that the new restriction plan may attain its expressed aims and go no further.

CURRENT • NEWS
of the Rubber Industry

MAY, 1934

President Approves Retail Tire Code; NRA Sets "Floor" Prices for Casings

Emergency Is Declared to Exist in the Trade— Thirty-four Trade Practice Provisions Are Included in Code to Eliminate Unfair Competition

TROUBLES of the tire distributing trade approached nearer to settlement this month when President Roosevelt on May 1 approved a code of fair competition for the retail rubber tire and battery trade, subject to a proviso which confers upon National Recovery Administrator Hugh S. Johnson the right to determine the existence of an emergency in the trade due to destructive price-cutting, and to set the lowest reasonable price at which products of the trade may be sold during the emergency period.

The Recovery Administration has announced that such emergency in the retailing of tires will be declared prior to May 14, the effective date of the approved code, and that until the emergency passes no retailer will be permitted to sell tires below certain "floor" prices which the NRA has established as reasonable. Above the floor price, competition will be perfectly free; but at the floor, competition will cease in the public interest.

These "floor" prices on the 28x4.75-19 tire used on many Ford and Chevrolet cars will be:

Class A Tires $6.70 ea.
Class B Tires 6.05 ea.
Class C Tires 5.20 ea.

As approved by the President, the code provides for a minimum wage of 40 cents per hour for part time employees or employees paid on an hourly basis in Northern States, and 35 cents per hour in Southern States. Minimums for salaried employees range from $12 per week in towns of less than 2,500 population to $15 in cities of 500,000.

Under the code, employees are limited to 48 hours per week, with a restriction of 10 hours per day and 52 hours in any one week. Overtime in excess of 48 hours shall be paid at the rate of time-and-one-third.

Thirty-four trade practice provisions, designed to eliminate various forms of unfair competition, are set forth. These deal with misleading advertising, price guarantees, secret rebates, the sale of "seconds" and other merchandise. A further provision requires the posting of prices in a conspicuous manner in the dealers' establishments for the guidance of consumers.

Supplemental codes for the wholesale tire and battery trade, and the tire rebuilding and retreading industry or trade, the code provides, may be submitted as part of this document at a later date.

In his letter transmitting the code to the President, General Johnson pointed out that this trade "urgently needs" a code of fair competition; and declared that "the reclamation of this industry and trade from the destructive competition which has existed must be a continuing task over a long period of time."

The Division of Research and Planning found the following to be the main factors in the situation:

(1) An extraordinary spread in costs between small and mass distributors.
(2) Retail prices determined largely by the mass distributors.
(3) Imminent bankruptcy of thousands of local dealers.
(4) Unjustified spread in prices between first, second and third line tires. Third and fourth line tires sold below cost.

The prices found as reasonable by the Research and Planning Division are designed to:

(1) Provide a measure of protection to local distributors for a period during which the industry must work out readjustments.
(2) Establish the level below which healthy price competition becomes destructive and contrary to the public interest.
(3) Close the price gap between first line and third line tires and force competition between tires on basis of relative quality, thus protecting the consumer.
(4) Eliminate use of third and fourth line tires as loss leaders.

While no exact data are available as to the number of establishments selling tires and batteries, or the number of employees involved, it is believed that some 175,000 shops will be affected by the code in so far as trade practices are concerned. Tires and batteries are sold in many types of establishments, including filling stations, motor vehicle retail stores, garages, tire and battery stores, automotive accessories stores and department stores.

Prior to last August, employees in the trade, variously estimated at from 100,000 to 150,000, averaged from sixty to seventy hours per week.

Approval of the code was also conditioned upon submission by the Code Authority within 90 days of recommendations to the Administrator for the purpose of rendering the wage and hour provisions of this code as consistent as possible with such provisions in codes of related trades.

J. D. Tew, president of the B. F. Goodrich Company, warmly commended the price-fixing step, saying, "The National Recovery Administration has made a definite contribution to the rubber industry in establishing base prices. This action, in our opinion, will prevent repetition of price wars experienced among tire dealers during the last three years and should particularly benefit independent tire dealers by assuring a degree of price stability which has heretofore been lacking.

"The retail tire and battery code will be well received by the entire industry.

"This code contains many excellent provisions relating to trade practices and represents months of intensive work on the part of the joint committee comprising representatives of all types of retail tire distribution. The new code is certainly to be helpful to the whole industry."

AJAX PLANT, EQUIPMENT TO BE SOLD AT AUCTION

The factory and machinery of the Ajax Rubber Company, Inc., Racine, Wis., will be sold at auction on May 16 and 17. Sales will be conducted at 10 A.M. on each day on the premises under the supervision of Samuel T. Freeman & Company.

In addition to the tire manufacturing plant, equipment to be sold includes mills, mixers, calenders, vulcanizers, presses, molds, tire building machines, bias cutters, motors, conveyors, lathes, turbines and generator sets. One hundred dwellings on the factory property were scheduled to be sold on May 14 and 15

A company has recently been formed in Racine for the possible acquisition of the factory. It was incorporated as the Ajax-Racine Tire & Rubber Company, with H. S. Wagoner, F. Lee Norton and George W. Taylor as incorporators.

CONSUMPTION IN MARCH TOTALLED 47,614 TONS

Consumption of crude rubber by manufacturers in the United States for the month of March amounted to 47,614 long tons, which compares with 40,609 long tons for February. March consumption represented the fourth largest month in the history of the industry and shows an increase of 17.2 per cent over February and 163.8 per cent over March a year ago, according to statistics released by the Rubber Manufacturers Association. Consumption for March, 1933, was reported to be 18,047 long tons.

Imports of crude rubber for March were 44,605 long tons, an increase of 43.7 per cent over February and 60 per cent above March 1933.

The association estimates total domestic stocks for crude rubber on hand March 31, at 351,064 long tons, which compares with February 28th, stocks of 357,094 long tons. March stocks show a decrease of 1.7 per cent as compared with February and were 10.1 per cent below stocks of March 31, 1933.

The participants in the statistical compilation report 54,722 long tons of crude rubber afloat for the United States ports on March 31st, compared with 53,063 long tons afloat on February 28th this year, and 29,531 long tons afloat on March 31, 1933.

March reclaimed rubber consumption is estimated to be 9,683 long tons, production 11,479 long tons, stocks on hand March 31st, 25,113 long tons.

CANADIAN CARBON BLACK PLANT TO BE ERECTED

The first carbon black plant in Canada on the farm of C. R. Ecklin, nine miles north of Craigmyle, Alta., 122 miles east of Calgary, is expected to be in production by July, reported the *Journal of Commerce* (N.Y.) recently.

Several weeks ago Mr. Ecklin received a special Government permit to produce carbon black. The plant is being built by the Pioneer Carbon Black Co., Ltd., at an estimated cost of $20,000. In addition, more than a dozen wells will be drilled on the Craigmyle farm.

Drilling a water well fifteen years ago, Mr. Ecklin struck a flow of about 50,000 cubic feet of dry gas at the 450-foot level. Ever since he has had an abundant supply of gas for his farm. In 1923 he drilled two more wells to the same level, and obtained flows of approximately 100,000 cubic feet a day from each.

During the past twelve months, Mr. Ecklin has produced with an inadequate plant of his own a total of about 350 pounds of carbon black which he has disposed of to a paint firm in Calgary. At present carbon black used in Canada is imported from the United States.

Talc and Soapstone Code

A code of fair competition for the talc and soapstone industry was approved by NRA Administrator Hugh S. Johnson on March 21 and became effective March 31. The code provides for the selling of all products at prices to be filed with the code authority and recommends that price increases, if made, should, so far as possible, be limited to actual additional increases in the seller's costs.

Decision in V-Belt Suit

In a recent decision by the United States District Court of the Southern District of Ohio, it was held that the V-belt made by the L. H. Gilmer Company is not an infringement of the Short patent on V-belts owned by the Dayton Rubber Manufacturing Company, the plaintiff in the suit. The court ordered the bill of complaint to be dismissed with costs to be paid by Dayton. The suit was instituted in 1931.

CHARLES A. COFFIN AWARD WON BY E. W. SCHWARTZ

Emil W. Schwartz, chief of the chemical laboratory at the Bridgeport, Conn., rubber works of the General Electric Company, was recently selected by that company to receive the Charles A. Coffin Award of Achievement. He was formally presented with the Charles A. Coffin medal, a substantial cash award and the engraved scroll of the Coffin Foundation which reads, "In recognition of his outstanding skill in compounding new and improved rubber materials."

E. W. SCHWARTZ

A native of Bridgeport, Mr. Schwartz was graduated from the Sheffield Scientific School of Yale University and joined the company as a chemist in the wire department in January, 1924. His first duties required a study of wire and wire design, and later he took up the problems in chemistry and technique involved in the industrial use of rubber. In the last year he has devoted himself to the development of a line of mechanical rubber products, insulations, new wire finishes and new types of finishes and finishing materials. His developments include a blended compound to replace tire reclaim, a superior compounded stock for use on portable cables, a non-tarnishing rubber gasket material for refrigerators, and miscellaneous cost-saving rubber parts.

Goodyear Sued on Trade Mark

The Hervey E. Guptill Company, Seabrook, N. H., manufacturer of women's and children's shoes, has brought suit for $3,000,000 against the Goodyear Tire & Rubber Company in the United States District Court at Boston, Mass., charging infringement of a registered trade mark. Goodyear denies the infringement, stating that their winged heel trade mark, which is in question, has been used since 1906 in the manufacture of heels and soles.

Firestone Vacation Policy

The Firestone Tire & Rubber Company's vacation policy for the year, affecting close to 5,000 factory employes, is as follows: Those having completed five years service by April 1 receive one week's vacation with 30 hours pay, and those having completed 10 years service receive two weeks' vacation with 60 hours pay.

JANUARY TIRE OUTPUT 73% HIGHER THAN 1933

Shipments of pneumatic casings for the month of January, 1934, amounted to 3,222,398 casings, a decrease of 8.7 per cent under December, 1933, but 24 per cent above January, 1933, according to statistics released by the Rubber Manufacturers Association, Inc.

This organization reports production of pneumatic casings for January, 1934, to be 3,921,587 casings, an increase of 27.2 per cent above December, 1933, and 73.7 per cent above January, 1933.

Pneumatic casings in the hands of manufacturers January 31, 1934, amounted to 9,684,389 units, an increase of 9.0 per cent above December 31, 1933 stocks and was 33 8 per cent above stocks January 31, 1933.

The actual figures are as follows:

PNEUMATIC CASINGS

		Shipments	*Production*	*Inventory*
Jan.,	1934	3,222,398	3,921,587	9,684,389
Dec.,	1933	3,531,121	3,081,886	8,888,070
Jan.,	1933	2,596,585	2,257,846	7,236,845

February figures, just released, follow:

PNEUMATIC CASINGS

Feb.,	1934	3,285,013	4,335,092	10,725,032
Jan.,	1934	3,222,398	3,921,587	9,684,389
Feb.,	1933	2,292,463	2,339,373	7,376,946

GENERAL TIRE & RUBBER INCREASES ADVERTISING

Confident that the accumulated demand for automobile tires will mean greatly increased tire business in 1934, the General Tire & Rubber Company has increased its advertising appropriation 40 per cent over that of 1933, it was said by Col. J. A. Kick, advertising manager. All of the 1934 advertising space and radio time already had been contracted for, he said.

The company's 1934 program places emphasis on the new silent safety tread tire recently introduced by General as an improvement on its blowout-proof tire and on the streamline Jumbo low-pressure tire, now in general use.

The greater part of the increased volume of advertising that General will do in 1934 will be in national magazines, Col. Kick said, while daily newspapers and radio will also share. On April 6, General will start a 26-week coast-to-coast radio program over 50 stations on the NBC-WEAF Red network, with a weekly show headed by Jack Benny, Frank Parker, Mary Livingstone and Don Bestor's orchestra.

Pennsylvania Adds Equipment

The Pennsylvania Rubber Company, Jeannette, Pa., is expanding its manufacturing facilities by converting a former storage plant into a rubber milling unit. The building has been reinforced, and the company is installing a 65-ton Banbury mixer, a Farrel mill and a modern strainer. The company has also drilled two additional deep wells recently and installed new pumping and cooling equipment.

EXPANSION PLANNED FOR FIRESTONE POWER PLANT

Improvement and expansion plans which it is reported will make the power plant of the Firestone Tire & Rubber Company at Akron "one of the finest in America" are now being developed. Although complete details were not available, it was officially reported the remodeled power unit will be second only to the Ford Motor Company's factory in size and may even surpass it in many modern improvements.

The company recently purchased from the Combustion Engineering Company a 300,000-lb. per hour, 1400-lb. pressure sectional-header boiler with water-cooled walls, slagging furnaces, economizer, air heater and pulverized coal burners.

Goodyear Under 30 Codes

The Goodyear Tire & Rubber Company is at present operating under more than 30 individual NRA codes, it was revealed in a statement by Clifton C. Slusser, vice-president and factory manager, on February 27. Mr. Slusser charged that the code policy for industry erred in that it "extended its efforts to cure specific evils rather than to cure the cause of those evils, so that it has become top-heavy and disconcertingly complex."

Ask Sundries Code Amendments

The rubber sundries division of the rubber manufacturing industry has submitted an application for modification of the code of fair competition by amendments classifying consumer groups and regulating differential control, terms of delivery and cost computation. A hearing is scheduled for May 15 at 10 A. M. in the Hall of Nations, Washington, D. C.

Hood Asks Code Exemption

A hearing was scheduled to be held at Washington on May 14 under Deputy Administrator A. L. Kress on the application of the Hood Rubber Products Company, Watertown, Mass., for exemption from chapter VI, article III, of the code of fair competition for the rubber manufacturing industry. This section requires members of the heel and sole division to publish and file with the divisional authority a schedule of prices and terms.

NRA Grants Aetna Petition

The National Recovery Administration announced on April 17, grant of the application of the Aetna Rubber Company for a stay of that section of the code for the Rubber Manufacturing Industry providing that no member of the industry shall coat or combine fabrics for automobile topping for the jobbing or replacement trades where the customer purchases his own fabrics direct from the textile manufacturers. The stay is for 90 days. It is granted not only for the Aetna but for other companies engaged in similar work, but with the understanding that they comply with the other provisions of the code.

Pharis Strike Is Settled

A strike of 800 employes of the Pharis Tire & Rubber Company, Newark, O., was settled by the workers returning to the plant April 16 under a compromise agreement by which they received wage increases averaging 15 per cent. The brief strike was marked by a complete lack of violence of any type, and a scheduled parade of protest was turned into one of good will on the final day.

Aetna Strike Is Ended

Normal operations were resumed at the Aetna Rubber Company, Ashtabula, O., on April 18 after a strike of the 350 employes, which had lasted since March 20. A 10 per cent increase in wages was given to the male employes of the plant, the women having previously received a 16½ per cent increase. In the course of the strike, thirteen union members were indicted for violence and five were sentenced to jail terms.

Workers Favor Company Union

A company union, rather than an affiliate of the United Mine Workers of America, was favored in a 221 to 146 vote by workers at the coal mine of the Goodyear Tire & Rubber Company at Somers, O. Proponents of the company union, an employes' assembly plan which has been in effect for five years, declared wage and hour scales at the mine are better than the U. M. W. A. rates

Kelly-Springfield Moves Office

The Kelly-Springfield Tire Company has moved its executive offices to the Chrysler Building, 395 Lexington Avenue, New York City. The company's headquarters were formerly in the General Motors Building, 1775 Broadway.

AMERICAN CYANAMID HAS CRUDE RUBBER DIVISION

The American Cyanamid & Chemical Corporation, 30 Rockefeller Plaza, New York City, has announced the opening of a division to import and deal in crude rubber. The corporation already is in contact with the rubber consuming industry, inasmuch as it handles rubber sulphur, rubber accelerators, pigments, compounding ingredients, and heavy chemicals.

The Crude Rubber Division will be under the direction of Bancroft W. Henderson. Mr. Henderson has had a very broad experience in crude rubber, beginning his business career in that article as early as 1907. Mr. Henderson has an extensive acquaintance in the rubber manufacturing industry both in this country and abroad; he has made several extensive trips to the Far East, visiting the countries of production, returning from his last trip in the fall of 1933.

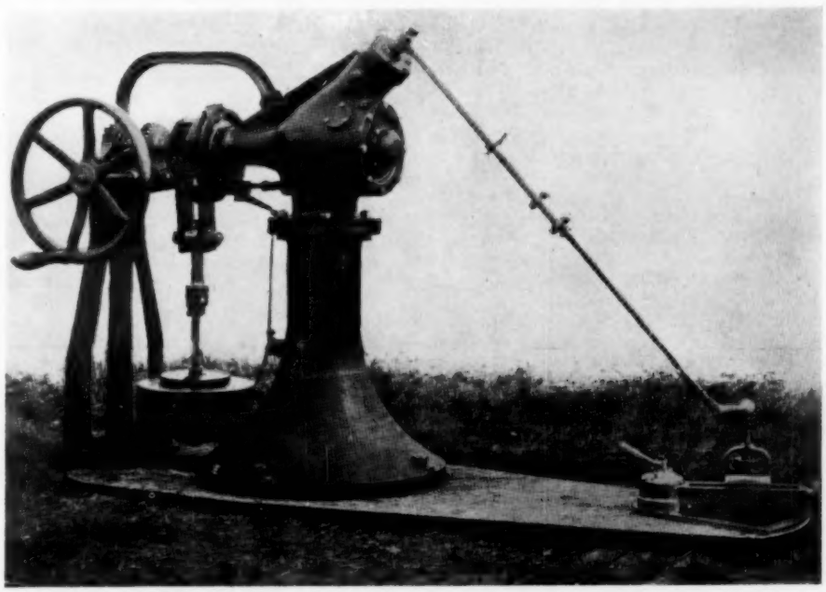
Amthor Instrument Moves

The Amthor Testing Instrument Company, manufacturers of speed recorders and testing instruments, has moved from 309 Johnson Street to 10 Leo Place, Brooklyn, N. Y. The new plant combines office, showroom and factory on one entire floor.

Goodrich Resumes Sales School

For the first time since the summer of 1930, the B. F. Goodrich Company, Akron, O., is now engaged in an extensive sales training school program. Instead of the larger groups, which formerly constituted classes in a sales training effort, the company is now limiting classes to four or five men to provide more individual attention.

Robot Golfer Tests Dunlop Golf Balls



This "robot golfer" tests golf balls produced at the Fort Dunlop, England, plant of the Dunlop Rubber Company, Ltd. It is said to give an amazingly accurate reproduction of a golfer's drive, enabling the company to study the ability of its balls to give satisfactory performance in regard to distance.

NEW ENGLAND NEWS

The Seamless Rubber Company, New Haven, Conn., is preparing to introduce "Trutex," a new masking tape for industrial and household use for which special advantages are claimed. The basis of the new tape is a specially developed fabric which is neither cloth or paper, but which is said to possess the advantages of both. The composition of the fabric is not disclosed.

While the tape will be used most extensively in the automotive industry, the company plans a widespread campaign of exploitation on the new product. The tape is superior to standard masking tape in that it tears with a straight edge, strips off cleanly and has other features, it is stated.

The J. Walter Thompson Company, New York advertising agency, has been appointed by the Seamless company to handle all advertising of the wide variety of rubber goods manufactured for the drug, sporting goods and other fields.

Much estimating is being conducted in connection with the equipment requirements of rubber manufacturers in the Southern New England area, and the outlook for the summer months is distinctly encouraging, according to C. A. Stephan, secretary of the Hoggson & Pettis Manufacturing Company, New Haven, Conn., which manufactures rubber workers' tools, cutting discs, molds and engraved calendar rolls. The company enjoyed good business in March, and while there was a let-down about the middle of April, prospects for the future are good, Mr. Stephan said.

Waterproof footwear departments of the United States Rubber Company, Naugatuck, Conn., went on a five-day operating schedule April 23, and will continue on that basis indefinitely, according to Factory Manager Walter H. Norton. Beginning May 1, all departments in the tennis footwear division were to resume a four-day schedule after a brief curtailment of production. No change in bathing shoe production was announced. The customary summer shutdown for inventory will probably take place in July, it is understood.

R. Emmet Baxter, 47, in charge of the sundries department in the U. S. Rubber plant at Naugatuck and an employe of the company for 30 years, died April 12 after an illness of several months.

Howard O. Smith, advertising manager of the Fisk Rubber Corporation, Chicopee Falls, Mass., since the reorganization last year, has terminated his connection with the company, it was learned April 27. Mr. Smith, who is a son of Theodore G. Smith, vice-president of the Hanover Bank & Trust Company, New York, and a director and member of the reorganization committee of Fisk, has returned to New York.

The Fisk corporation is encouraging employe welfare and recreational activities and has already assisted in the formation of social and athletic association which will sponsor both baseball and soft ball teams and participate in other fields of recreation. In contrast with former Fisk employe groups, this organization has been formed and officered entirely by workers.

Business of the Russell Manufacturing Company, Middletown, Conn., up to the middle of April, was 65 per cent ahead of the same period last year, President G. M. Williams reported at a special meeting of stockholders April 18. Part of the plant is now operating on three shifts to meet production requirements and a plant improvement and modernization program has been inaugurated. The company produces elastic webbing and brake lining.

The stockholders authorized an increase in the capitalization from $2,000,000 to $2,400,000, the extra $400,00 being needed to meet the maximum requirements of a contract now being executed with President Williams, who took over management of the company several months ago. Charles T. Treadway was elected a member of the board of directors. He was formerly a member, and was not re-elected at the annual meeting because he was out of the country at the time.

"The position of smaller manufacturers in an industry dominated by large producers," was the topic of an address given by Frederick Machlin, treasurer and general manager of the Armstrong Rubber Company, West Haven, Conn., tire manufacturers, before the New Haven, Conn., Advertising Club April 16. He discussed the preparation of advertising and its mission as used by small manufacturers. Before joining the Armstrong company in 1919 Mr. Machlin was treasurer of the Dayton Rubber Manufacturing Company of Dayton, Ohio, for three years.

RUBBER MEN TO OPPOSE TAXES ON COCONUT OIL

The Rubber Manufacturers Association, Inc., has taken an active part in the fight to kill the proposed processing tax on coconut oil. Through its president, A. L. Viles, it has advised members of Congress that the rubber industry will suffer severely if the tax is not eliminated.

Approximately $100,000 worth of coconut oil is used annually by the rubber industry. It is used principally as a softener in compounds, and also has uses as a rubber accelerator and as a pigment dispersing agent. Its use is still in the process of development, but it has already found to have considerable value in rubber compounding.

Coast Plants Are Busy

Marked increases in employment, hourly wage rates and production over last year are reported by the Goodyear, Goodrich, Firestone and United States Rubber affiliates in Los Angeles, Cal. Employment is from 40 to 50 per cent above 1933, and hourly wage rates have increased by approximately one-third with the average hourly earnings now higher than for the peak years of 1928 and 1929. The plants are averaging from 60 to 65 per cent of capacity, compared with an approximated average of 42 per cent a year ago.

To Handle Goodrich Advertising

Fuller & Smith & Ross, Inc., advertising agency of Cleveland, O., has been appointed to direct the advertising of the associated tire lines of the B. F. Goodrich Rubber Company. This covers the advertising of Hood, Miller, Diamond and Brunswick tires.

TRENTON NEWS

Governor A. Harry Moore has signed the State code for the retail tire trade, sponsored by the New Jersey Tire Dealers' Association. There are approximately 6,100 concerns engaged in the industry in New Jersey with an invested capital of $8,000,000. Minimum prices will be fixed by the code authority.

The Michelin Tire Company, of France, has protested to the town of Milltown, N. J., on paying an increase in taxes on its abandoned plant there. The plant has been closed for the past three years.

Charles E. Stokes, Jr., vice president of the Home Rubber Company, has been motoring through Florida for several weeks with Mrs. Stokes.

The plant of the Jenkins Rubber Company, Elizabeth, N. J., has been sold to the Roxalin Flexible Lacquer Company, Long Island City, N. Y., makers of rubber lacquers.

Trustees of a fund of $200,000 created by the will of Edgar T. Phillips, of Lambertville, have been granted permission by Vice Chancellor Buchanan to use the fund for the creation of a hospital. The income, which averages about $8,000 a year, will be spent for the support of an ambulance service and board of patients in Trenton Hospitals. Mr. Phillips, who died several years ago, was an official of the Crescent Insulated Wire & Cable Company, Trenton, and was well known in the rubber industry.

MacEwan Rubber Company, Inc., of 125 Broad Street, Elizabeth, N. J., has been chartered at Trenton with 1,000 shares to manufacture all kinds of rubber articles. John A. MacEwan, of 90 Maple Place, Keyport, is head of the concern.

Bruce Bedford, president of the Luzerne Rubber Company, Trenton, has been spending some time in Miami Beach, Fla., with his family.

Thermoid Company, Trenton, is one of the busiest concerns in this city, operating twenty-four hours a day on automotive orders.

Names in the News

LUCIUS D. TOMPKINS, vice-president of the United States Rubber Company, has been appointed administrative member of the silk textile code authority. Mr. Tompkins, who has served as special assistant to GENERAL JOHNSON, NRA Administrator, will act in effect as government representative, presenting the government's point of view on all questions that arise in the administration of the industry. He succeeds LUCIUS R. EASTMAN in this post.

WALTER G. PATTON was named general traffic manager of the St. Joseph Lead Company on April 24, with offices at New York City and Bonne Terre, Mo. At the same time J. E. BOUCHARD was appointed assistant general traffic manager with headquarters at Bonne Terre, Mo.

DR. E. A. HAUSER, well known rubber technologist of Vienna, was severely injured in a recent automobile accident. He is recuperating at a hospital in the Austrian capital.

JOHN A. MACMILLAN, president, Dayton Rubber Manufacturing Company, was interviewed by LOWELL THOMAS in a special radio broadcast on April 19 in connection with the first annual Dayton industrial exhibition.

H. V. BROWNE, manager of office standards of the B. F. Goodrich Company, has returned to his office after spending five months at the factories of the Euzkadi Rubber Company, Mexico City.

W. F. LUND, insurance division manager of the United States Rubber Company, led a discussion held during the insurance conference of the American Management Association at the Chalfonte-Haddon Hall, Atlantic City, N. J., on May 14.

C. F. DAVIDSON, representative of the B. F. Goodrich Rubber Company for ten years and of the United States Rubber Company for two years, has become president and treasurer of the Davidson Chevrolet Company, Springfield, O.

H. S. COLBY, until recently president of the Air Preheater Corporation, has been appointed general sales manager of the Combustion Engineering Company, New York City. Educated at Cooper Union and Columbia University, Mr. Colby has for the past twenty years been engaged in the design, production and sales of steam generating equipment.

THOMAS H. MCINNERNEY, president of the National Dairy Products Corporation, and SIR WALROND A. F. SINCLAIR, chairman and managing director of the British Goodrich Rubber Company, were elected directors of the B. F. Goodrich Company at the stockholders' meeting on May 2. Other directors and all company officers were re-elected.

C. M. A. STINE, vice-president of E. I. du Pont de Nemours & Company, discussed approaches to chemical research in an address at the Franklin Institute, Philadelphia, Pa., last month. He pictured the United States and Germany as being in a race for supremacy in the development of synthetic rubber.

WILLIAM SEWALL, former advertising executive of the B. F. Goodrich Company, has been transferred to New York City in charge of petroleum company sales for Goodrich in that district. Sewall was with Hood Rubber Company before joining Goodrich in 1929.

EDMUND BILLINGS, for the past ten years sales manager of Godfrey L. Cabot, Inc., Boston, Mass., has been elected a vice-president of the corporation. Mr. Billings, a

EDMUND BILLINGS

Harvard University graduate, is married and has a family of four children. His home is in Weston, Mass.

HENRI DUCROS, manager of mechanical goods production of the Societe Francaise B. F. Goodrich, arrived in Akron on April 24 for conference with officials of the parent company. He will remain in Akron until the end of May.

J. F. JOSEPH has been elected president of the Cincinnati Rubber Manufacturing Company, Cincinnati, O., succeeding the late FRED A. GEIER, who died on March 27. Mr. Joseph was formerly vice-president and general manager.

PAUL E. COLLETTE, secretary-treasurer of the Oak Rubber Company, Ravenna, O., has been elected president of the Ravenna Chamber of Commerce.

S. Johnson Heads Toledo Rubber

Directors of the Toledo Rubber Products Corporation, Middlefield, Ohio, have elected Smith Johnson as president of the company to succeed the late J. E. Johnson. Other officers chosen are Earl W. Coble, vice-president; William P. Miller, secretary; L. Mae Silverthorne, treasurer, and Hugh G. Johnson, general manager.

GOODRICH ADOPTS PLAN FOR WORKERS' PENSIONS

Employees of the B. F. Goodrich Company and subsidiary companies in the United States and Canada numbering 21,000 are eligible to participate in a pension retirement plan made effective through the purchase by Goodrich of the largest pension policy ever written by the Aetna Life Insurance Company of Hartford, J. D. Tew, president of Goodrich, announced April 2.

The pension retirement plan, providing for income of Goodrich employees on retirement, will result in the accumulation for company employees of combined savings totaling $1,500,000 annually, according to estimates. The retirement age for male employees is sixty-five years and for female employees it is sixty.

The plan provides that the amount of the pension will depend upon the length of the employee's membership, and is based on average weekly earnings. Employees who participate will make small weekly payment and the Goodrich Company will make the necessary additional contributions.

"This company has carried group life insurance since 1915 and group sickness and accident insurance since 1926," Mr. Tew said. "During this period benefits aggregating more than $3,000,000 have been paid to employees and their beneficiaries as a result of death, sickness or accident.

"The retirement pension plan has been adopted only after careful study based on the same fundamental policy that made possible the present insurance program for our people.

"Under this pension plan the employees may now look forward to retiring from active service with an assured income for the remainder of life guaranteed by one of the largest and strongest insurance companies in the world."

Factory and office employees of B. F. Goodrich Company, Akron; Pacific Goodrich Rubber Company, Los Angeles; Canadian Goodrich, Ltd., Kitchener, Ontario, Canada, and Martha Mills, Inc., Silvertown, Ga., are eligible to participate in the plan.

Rubber Trading Hours Changed

Effective May 7, the rubber market on the Commodity Exchange, Inc., is opened at 10 A.M. instead of 10:10 A.M. as previously. Rules governing the delivery of crude rubber have also been revised. Rule 17 in regard to delivery on dock and payment therefor under terms of the No. 1 standard contract have been amended to include the new provision that "the deliverer shall provide, at his expense, free dockage for at least two business days after the date stated for delivery." Members of the exchange last month approved in balloting new by-laws with regard to the recertification of rubber.

General Buys Plane

The General Tire & Rubber Company has taken over the Lockheed plane formerly owned by the Shell Oil Company and sometimes flown by Major James Doolittle. Pilot Ray Brown of General will fly the ship.

ST. CLAIR RUBBER CO. TO EXPAND HOME SALES

Although it has developed and sold its Rubber-Tex and other rubber flooring through contract channels for the last two years, the St. Clair Rubber Company, Marysville, Mich., plans to expand production and distribution of its products for the home, according to P. H. O'Brien, sales manager.

Rubber-Tex, offered in three colors, is claimed to be the only waterproof fabric in the market. Its surface appears to be of about the same texture as a Brussels, but is treated in rubber with a vulcanized back. The fabric is made in 27, 36 and 54 inch widths, and rolls are from 30 to 35 yards.

The company recently exhibited its Rubber-Tex and rubber flooring in the offices of Thomas Scoles, Inc., Textile Building, New York City.

Fisk Rubber Nets $120,287

The Fisk Rubber Corporation and subsidiaries report for the three months ending March 31, 1934, net income of $120,287 after taxes. Sales during the period totalled $2,156,197. A separate account of export business in liquidation shows sales of $6,655 with a net loss of $1,031.

Raybestos-Manhattan Gains

Business of Raybestos-Manhattan, Inc., so far this year has run well ahead of the like period of 1933 both in volume and earnings, Sumner Simpson, president, told stockholders at the company's annual meeting April 4. Material costs are substantially higher and labor costs will probably increase further, he said, but the company is seeking to improve its operating efficiency and lower its costs through installation of new equipment.

Anchor Rubber Begins Operation

Operations were started during the week of April 23 by Anchor Rubber Products, Inc., in the factory just opened at 3170 West 33rd Street, Cleveland, O. The company is manufacturing soft molded automotive, household and mechanical goods, including automobile mats, running board matting, stair treads, door mats, corrugated matting and other items. Officers of the company include Ben Kravitz, president; Oscar Kravitz, secretary-treasurer, and H. A. Maguire, sales manager.

Cooper Plant at Capacity

Pay increases of from 5 to 10 per cent, affecting 500 workers, were announced last month by R. P. Bremer, president of the Cooper Corporation, Findlay, O. This tire factory, he said, is operating at its greatest capacity in seven years.

Form Trober Rubber Corp.

The Trober Rubber Corporation was incorporated last month, with headquarters in Akron, O. The company has been incorporated for $25,000, with 1,000 shares of capital stock.

Financial News

Master Tire Loses $248,966

The Master Tire & Rubber Corporation reports for the year of 1933 a net loss of $248,966 after interest, depreciation, provision for doubtful accounts and other charges. This compares with a net loss of $95,565 in 1932. Net sales were $4,361,510 as against $3,311,625 in the preceding year. The company controls the Falls Rubber Company, Giant Tire & Rubber Company, Cooper Corporation and Quaker City Rubber Company.

Columbian Carbon Profits Gain

The Columbian Carbon Company reports for the first three months of 1934 a net income of $558,000, equal to $1.04 a common share. This compares with earnings in the first quarter of last year of $243,333, or 45 cents a common share.

American Cyanamid Profit

The American Cyanamid Company and subsidiaries report for 1933 a net profit of $2,467,682. This compares with a net profit of $349,725 in 1932.

United Carbon Nets $309,863

The United Carbon Company reports net profit for the first three months of 1934 as $309,863, comparing with earnings of $128,970 in the first quarter of 1933. The company has called for retirement at $110 a share on July 1 its participating non-cumulative preferred stock, of which 17,326 shares were in the hands of the public on March 31.

Du Pont Earnings Increase

Report of E. I. du Pont de Nemours & Company for the first quarter of the year shows income from operations of $8,813,143, against $2,369,570 for the like period of last year. Total net earnings were $9,982,944, comparing with $3,825,428 in 1933.

PROFIT OF $674,117 SHOWN BY MONSANTO CHEMICAL

Net profits of the Monsanto Chemical Company for the first quarter of 1934 were $674,117, equivalent to $1.56 a share on the 432,000 shares outstanding, compared with $296,920, or 69.5 cents a share for the corresponding quarter last year.

In his report, Edgar M. Queeny, president, states that Monsanto's sales and profit levels of the last six months of 1933 were maintained during the first quarter of this year. During the quarter, $371,362 was invested in plant expansion and improvement. Working capital was increased by $509,066.

The board of directors last month voted a quarterly dividend of 25 cents a share, including shares comprising the 100 per cent stock distribution effective April 30, payable June 15 to stockholders of record May 25.

U. S. RUBBER SALES GAIN IN ALL DEPARTMENTS

Business in all divisions of the United States Rubber Company is showing favorable increases over the corresponding period of 1933, F. B. Davis, Jr., president, stated at the annual stockholders' meeting on April 17. Tire replacement demand is strong and improvement in mechanical goods is noticeable, he said. Substantial footwear restocking is expected, and the company's Lastex division shows continued growth.

Stockholders elected William M. Stevens a director to fill a vacancy, while retiring directors were reelected. They approved granting an option to Mr. Davis to purchase 20,000 shares of common stock at not less than $20 a share as well as other financial changes.

William de Krafft, chairman of the finance committee, said that the management was opposed to restriction and that compulsory curtailment would hit the production on the company's plantations of special types of rubber which are not competitive in the open market.

Mason Tire Settlement

Final accounting of the defunct Mason Tire & Rubber Company, presented on May 1, shows that 800 general creditors have received $970,505, about 50 per cent payment on their claims. In addition, secured claims of $600,000 and expenses of receivership were paid out of total receipts of $1,946,521. The company's tire plant at Bedford, O., will be opened June 1 by the Bedford Distilling Company for the manufacture of Bourbon whisky.

General Electric Profits Up

The General Electric Company reports profits for the first quarter of 1934 as $4,565,727, compared with $2,838,810 a year ago, an increase of 61 per cent. Sales for the three months were $34,935,550, which compares with $26,101,001 in 1933, an increase of 35 per cent.

C M C Rubber Company Formed

The C M C Rubber Company was organized last month at Cleveland, O., with headquarters in the Courtney Building, 1770 East 11th Street. The company has been incorporated with 250 shares of capital stock.

Tan Kah Kee in Receivership

Tan Kah Kee & Company, Ltd., largest rubber manufacturer in the Far East, passed into the hands of a receiver a few weeks ago. David Phillip, chartered accountant, was appointed receiver and manager by the Hong Kong and Shanghai Banking Corporation, which holds debentures in the business for $1,646,000 (Straits). The company's factory at Singapore, the largest industrial concern in that city, has employed 5,000 workers, turning out 10,000 pair of rubber shoes daily, together with other rubber goods, for world markets.

New Rubber Goods

Cubo Sports Oxford

As an addition to its Air-O-Flow line of footwear, the Cambridge Rubber Company, Cambridge, Mass., is introducing its Cubo sports oxford. The shoe is made of a light, easily-cleaned material especially suited to hot-weather wear and is equipped with an athletic arch insole that holds the foot in place, prevents slipping and absorbs shocks and with a vulcanized, non-swelling crepe outsole.

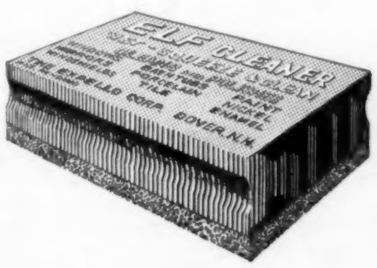
In addition, the almost invisible air vents insure constant ventilation. The shoe is made to sell at a popular price in styles for men, women and children.

Rubber Table Lamp

An all-rubber lamp standard has been placed on the market by David Moseley & Sons, Ltd., Manchester, England. It is made of solid rubber, offering complete insulation, and the rubber is polished and finished in plain and mottled colors. The stand will not scratch polished furniture, and it has sufficient resiliency to withstand rough usage. It is also possible to wash the stand with warm water and soap to remove any dirt.

Elf Cleaner

Under the name of the Elf Cleaner, the Expello Corporation, Dover, N. H., has recently introduced an entirely new cleaning device. It consists simply of a sponge rubber holder containing a cleaning powder and, when wet, the powder is



converted into a paste and comes out through a porous side on the surface rubber. In addition to being satisfactory for all household uses, it is said to be economical and to last fully as long as the average can of cleanser. It is sold to the consumer for 15 cents.

Rubber Bone and Dog Playball

The Barr Rubber Products Company, Sandusky, O., is offering dog owners novel accessories in an indestructible

playball and rubber bone, made of a compound said to be tougher and more resilient than any other sponge rubber. There is a light weight central core so that, when tossed to the dog, the toy can not injure his teeth and is light enough, on consequence of its construction, to

permit floating on the water. The compound has no ingredients that are in any way poisonous.

The city of Cardiff, England, has equipped certain of its old horse-drawn refuse collecting vehicles with modern pneumatic tires. In addition to converting an old-time type into a modern vehicle, this step reduces the weight of the cart and provides a lower loading line.

Jai-Alai Sports Shoe

From the Jai-Alai courts of Cuba came the idea for these comfortable sport shoes, manufactured by the Cuban American Shoe Company, North Adams, Mass. The

Cuban national game, which gives the shoes their name, requires strenuous foot-work and these special shoes were developed to meet its demands. A particularly thick and sturdy, yet light weight, crepe rubber sole is self-vulcanized to the soft, pliable uppers of white elk. A variety of styles is offered for both men and women.

Suede Finish Rubber Toys

The Dorco Rubber Corporation, 239 Fourth Avenue, New York City, is now selling a variety of rubber toys made with a special type of suede finish which is said to be a departure from anything made heretofore. The company also offers toys with a plain rubber finish or silk finish as well as a line of rubber floats and bathing caps.

Trimble Doll Bath

Trimble, Inc., Rochester, N. Y., have added to their line a new doll bath designed in smaller size from their regular Kiddie-Bath and marketed at a popular price. The doll bath has a length of 21 inches, height of 19 inches, and the tub is 7 inches deep. The frame is ivory with pink rubber tub and colorful trimmings. It is provided with a cretonne back, rubber soap pocket, and a safety strap on the dressing table.

The Three Little Pigs in Rubber Dolls

Rubber dolls in sculptured replica of the Three Little Pigs of the Walt Disney cartoons are now being produced by the Seiberling Latex Products Company, Barberton, O., under an exclusive licensing agreement. In addition to the Three Little Pigs, the company also introduced at the recent New York Toy Fair similar rubber replicas of Mickey Mouse and the Big Bad Wolf and a full line of inflated balls showing each of these characters.

GOODYEAR DEFENSE IS SET TO BEGIN JUNE 18

The defense of the Goodyear Tire & Rubber Company on the charge of Clayton Act violation in connection with its contract with Sears, Roebuck & Company, is scheduled to begin on June 18 at either Akron or Cleveland. The Federal Trade Commission concluded its side of the case on May 1 after hearings that had lasted since January 15.

During the past month, testimony was held at Akron, Washington and New York. Among those called to give testimony were Joseph O'Shaughnessy, former vice-president of the United States Rubber Company; E. G. Holt, assistant chief of the Leather-Rubber-Shoe Division of the Department of Commerce; F. D. Byron, special representative of the General Tire & Rubber Company and former assistant sales manager of the Kelly-Springfield Tire Company; and Martin J. Barry, president of the National Tire Dealers Association.

Goodyear attorneys opposed efforts of the commission to learn details of costs of crude rubber and fabric during 1933. "It would reveal a matter of policy," said Grover Higgins, of Goodyear counsel, "and would give competitors unfair advantage of Goodyear."

CARLTON NAMED TO HEAD AKRON RUBBER GROUP

C. A. Carlton, of the Seiberling Rubber Company, was named chairman of the Akron Group, Rubber Division, American Chemical Society, at the spring meeting of that body at the Akron City Club on April 30. A. Brill, of the Republic Rubber Company, was elected vice-chairman, and H. A. Hoffman, of E. I. du Pont de Nemours & Company, was chosen as secretary-treasurer.

A talk on "Recent Trends in Engineering Education" by Dr. Webster N. Jones, director of the college of engineering at the Carnegie Institute of Technology, was the main feature of the evening. Dr. Jones discussed the curricula being given engineering students so that they will be better fitted for the jobs they take after graduation. "It has become the custom," he said, "for colleges to employ instructors who have been engaged in industry, and students learn practical methods from them."

Lewis D. Parker

Lewis Darling Parker, former president of the Hartford Rubber Works, Hartford, Conn., died suddenly May 5 at his summer home in New Lebanon Center, N. Y. He was 70 years old.

Mr. Parker joined the rubber company as a young man, becoming treasurer and then president about 1898. He resigned in 1905 to enter another field.

Herbert S. DeLanie

Herbert S. DeLanie, member of the firm of M. Rothschild & Company, Inc., member of the Commodity Exchange, and one of the best known crude rubber traders in the New York market, died suddenly from a heart ailment on May 7. He was 40 years old, and was a resident of Montclair, N. J.

Mr. DeLanie began his career as a crude rubber trader with the firm of Robinson & Company, dealers, as an office boy and as a sampler of rubber on the docks. To his associates he was a skilled trader, whose counsel on probable trends was usually unfailing.

Services were held on May 9, with interment at Greenwood Cemetery, Brooklyn, N. Y., the following day.

Goodyear G-3 Tire

A new passenger car casing has been announced by the Goodyear Tire & Rubber Company, Akron, O., under the name of the G-3 All Weather. The maker claims that it has 43 per cent longer non-skid

wear; a wider, flatter tread; 16 per cent more non-skid blocks; wider riding ribs, and narrower grooves than the company's former casings. An average of two pounds more rubber is said to be embodied in the tread of each tire.

Norwalk Reports Loss

The Norwalk Tire & Rubber Company reports a net loss of $2,886 for the six months ended March 31, 1934. This compares with net profit of $3,750 in the six months ended March 31, 1933.

Thermoid Shows Profit

The Thermoid Company and subsidiaries, exclusive of the Southern Asbestos Company, reports net profit of $48,534 for the quarter ended March 31, 1934, comparing with a net loss of $103,363 in the like period a year ago. The Southern Asbestos Company, a 96 per cent owned subsidiary, reports for the first three months of this year net income of $8,203, as against net loss of $10,595 last year.

CODE AUTHORITY NAMED FOR RECLAIM INDUSTRY

National Recovery Administrator Hugh S. Johnson has appointed E. G. Holt, assistant chief, Leather-Rubber-Shoe Division, Department of Commerce, to be National Recovery Administration member, without vote, on the code authority for the reclaimed rubber manufacturing industry. He will serve during the pleasure of the administrator without expense to the industry.

Industry members named to the code authority are L. J. Plumb, U. S. Rubber Reclaiming Company, chairman; V. H. Dingmon, Xylos Rubber Company, and William Welch, Midwest Rubber Reclaiming Company. Alternates for these members are, respectively, E. B. Curtis, Naugatuck Chemical Company; A. I. Brand, Philadelphia Rubber Works Company, and Irving Laurie, Somerset Rubber Reclaiming Company.

NEW YORK RUBBER GROUP WILL MEET ON MAY 18

Members of the New York Group, Rubber Division, American Chemical Society, will hold their next meeting on the evening of Friday, May 18, in the clubroom of the Building Trades Employers Association, 2 Park Avenue, New York City. Dinner will be served at 6:30 P. M., followed by the presentation of three papers on technical subjects.

Lawrence A. Hawkins, of the research laboratory of the General Electric Company, will discuss "Scientific Certainties and Economic Doubts." S. W. Nourse will describe "The Preparation of Lantern Slides," and Dr. H. N. Whitford, of the Rubber Manufacturers Association, will speak on "Estate and Native Rubber Contrasted."

Plans have been completed for an all-day outing for Saturday, June 30, at Semler's Park, Grant City, Staten Island. Between luncheon and a shore dinner, there will be swimming, golf, baseball, novelty races, horse shoe pitching, fly casting and other games. Tickets will be $3.50, and reservations should be made with Bruce Silver, secretary-treasurer of the group, at the New Jersey Zinc Company, 160 Front Street, New York City.

RUBBER GOODS EXPORTS SHOW GAIN THIS YEAR

United States exports of rubber manufactures during the first 1934 quarter increased sharply over the like period in 1933, the Department of Commerce announces. Shipments totaled $4,994,762 in the first three months, against $3,507,089 in the like 1933 period and $4,741,507 in the first quarter of 1932.

Shipments in March this year were $2,028,156, against $1,484,246 in February. All classes of rubber products participated in the increase that was shown in March trade.

Dayton to Recapitalize

Recapitalization plans will be presented to stockholders of the Dayton Rubber Manufacturing Company at a special meeting on May 28. The company plans to issue new Class A stock and new common stock to replace the present preferred and several classes of common now outstanding. The company is also announcing the introduction of a line of Dayco printing press roller equipment.

Premier Adds to Plant

The Premier Rubber Manufacturing Company, Dayton, O., is constructing a new addition to its present factory facilities. The building will be part one-story and part two-story and will be of brick, steel and concrete. Most of the 8,000 square feet added by the new unit will be devoted to manufacturing purposes, but a portion will be used for storage space. Its cost is estimated at $10,000.

New Zealand Rubber Factory

The Reid New Zealand Rubber Mills, Ltd., has been organized at Penrose, Auckland, to manufacture rubber goods, particularly rubberware for the dairy industry. G. C. W. Reid is founder of the company.

Obituaries

Guy Blanchard

Guy Blanchard, former advertising manager of the Miller Rubber Company and sales promotion man for the B. F. Goodrich Company, died of a heart attack

on April 11. He was 64 years old. Prior to coming to Akron in 1925, Mr. Blanchard had spent 30 years in trade publication and other editorial work at Chicago.

In addition to his widow, he is survived by his mother, a daughter, two sisters and a brother.

Walter E. Piper

Walter Elbridge Piper, treasurer of the Tyer Rubber Company, Andover, Mass., died on April 1 after a six-week illness. He was 62 years old.

A graduate of the Massachusetts Institute of Technology, Mr. Piper was associated with the Boston Rubber Shoe Company, the President Suspender Company and the Firestone Tire & Rubber Company before becoming treasurer of the Tyer Rubber Company in 1922.

Services were held from his home at Sudbury, Mass., on April 4. He is survived by his widow, two daughters, a son and five grandchildren.

Irving Bromiley

Irving Bromiley, senior partner of Bromiley-Ross, Inc., New York advertising agency, died at his home in New Rochelle, N. Y., on April 20. He was well known in the rubber industry for his creation of the open-book local history displays of the United States Rubber Company, the figure of a traffic policeman with upraised hand used by the Hood Rubber Company, and other familiar outdoor advertising ideas.

Lester Krug

Lester Krug, associated until recently with the aeronautical department of the B. F. Goodrich Company, died in an airplane crash on April 13, together with Mrs. Virginia Krug, his bride of a year. He was a resident of Akron and a former lieutenant in the Army Air Service.

Walter D. Wood

Walter D. Wood, president of R. D. Wood & Company, machinery manufacturers, Philadelphia, Pa., died of heart disease at Washington, D. C., on April 20. He was 84 years old.

Mr. Wood was graduated from Haverford College in 1867 and also undertook graduate work at Harvard University. He was head of the Florence Pipe Foundry & Machine Company, Florence, N. J., and owner of the Cumberland County Gas Company, Millville Electric Light Company, Millville Water Company, High Pressure Construction Company and the Millville Daily Republican, all of Millville, N J.

Ralph Locke

Ralph Locke, president and general manager of the Perfection Rubber Company, Montreal, Que., died at his home in that city on April 27 in his 70th year. Born at Lockeport, N. S., he came to Montreal at an early age and for nearly forty years took an active part in the development of the shoe industry in that city.

Mr. Locke was also vice-president of the Slater Shoe Company at the time of his death. In addition to his widow, he is survived by one son, three sisters and one brother.

Keystone Ohio Company Moves

The Keystone Ohio Manufacturing Corporation has moved to new quarters at 1435 West 9th Street, Cleveland, O. This rubber sundries organization was formerly located at 963 Helmsdale Road in the same city.

Azo Moves New York Office

The American Zinc Sales Company, distributor of Azo zinc oxides, moved its New York City office last month to the Graybar Building, 420 Lexington Avenue. The office was formerly located at 331 Madison Avenue.

BRITISH GOODRICH WILL CHANGE COMPANY NAME

Directors of the British Goodrich Rubber Company, Ltd., propose to change the name of the company to the British Tyre & Rubber Company, Ltd., and to increase capital to £2,000,000 by creation of 1,050,000 new shares of £1 each.

It is proposed to make an immediate issue of 150,000 £1 shares in order to provide further working capital and to finance an offer to purchase 150,000 preferred ordinary £1 shares of the India Rubber Gutta Percha & Telegraph Works Company in which British Goodrich already is interested.

It also is proposed to modify the relations between British Goodrich and B. F. Goodrich Company of the United States so that the British company will be able to sell all its products in world markets instead of only in the United Kingdom and the British colonies. The British company will continue to enjoy the full benefit of the manufacturing and technical experience of the American company.

GROUP INSURANCE TAKEN BY SWAN AND HOLFAST

The Holfast Rubber Company, Atlanta, Ga., and the Swan Rubber Company, Bucyrus, O., have recently acquired group life insurance policies for the protection of their employes.

The policies were issued by the Prudential Insurance Company of America, the first involving a total of $95,000 and covering 69 employes and the Swan Rubber Company policy involving $79,000 for the protection of 73 workers.

The Holfast policy grants insurance in amounts ranging from $1,000 to $2,000, according to rank, while the amount of insurance placed on each worker by the Swan policy ranges from $1,000 to $2,000, also based on the rank or position held.

Both policies are of the contributory type, the employes sharing with the employing company in the pavment of the premiums.

Data on Dust Hazards

A series of monthly folders dealing with "dust-hazards" and their prevention in various industries is being issued by the Northern Blower Company, West 65th St. and Barberton Avenue, Cleveland, O. Consistent with the company's aim to present each subject dealt with in a strictly unbiased manner, the data used will, whenever possible, consist of government reports; reprints of authoritative articles from leading trade papers; tests and information from the company's own records; and similar reliable sources. It is planned to make the complete series a valuable record which will assist executives in eliminating occupational sickness among employes; also fire and explosion risks, etc.

INTERNATIONAL PULP CO., *41 Park Row, New York, N.Y.*

SOLE PRODUCERS OF PURE **ASBESTINE** SPECIALLY PREPARED FOR USE IN RUBBER

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LIBERAL WORKING SAMPLE FURNISHED FREE

MARKETS

RUBBER—COTTON AND FABRICS—CHEMICALS

NEW YORK, MAY 10, 1934

Crude Rubber

IN anticipation of the announcement on restriction which was finally made on Saturday, April 28, the market for crude rubber during April showed a rising strength culminating in a high of 13⅝ cents on the last day of the month compared to 11¼ on the first trading day of the month. On the exchange the spot quotation for April 2 was 11.25 and on April 30 it was 13.63 cents. The average spot price for Ribbed Smoked Sheets during April in the outside market was 12.10 compared to 11.01 in March. Since the beginning of this month quotations rose to a high of 15½ cents on May 7, since which day quotations have declined to 13¾ cents today. This decline is largely attributed to profit taking and to disappointment in the trade over the size of immediate restrictions but a further rise is looked for before long. Quotations on the Exchange, outside market, London and Singapore follow:

Plantations—

Ribbed Smoked Sheets—			
Spot	—	@	.13¾
May	—	@	.13¾
July-Sept.	—	@	.14
First Latex, crepe spot	—	@	.15¾
Amber Crepe, No. 2	—	@	11⅛
Amber Crepe, No. 3	—	@	.11⅛
Amber Crepe, No. 4	—	@	.11⅛
Brown Crepe, clean thin	—	@	.11⅛
Brown Crepe, rolled	—	@	.09½

Latex—

Liquid Latex, per gal.	.72	@	—

Paras—

Up-River, fine	—	@	.12½
Acre Bolivian, fine	—	@	.12¾

Balata—

Block, Ciudad	—	@	.37

LONDON MARKET

Standard Smoked Sheets—Buyers—May 10			
May	—	@	6 13/16d
July-Sept.	—	@	6½d

SINGAPORE MARKET

Standard Smoked Sheets—Sellers—May 10			
May	—	@	6 1/16d
July-Sept.	—	@	6 1/16

Reclaimed Rubber

The market for reclaimed rubber remains steady though it is reported quiet in spots. Following a temporary increase in interest by manufacturers when crude prices rose violently on the announcement of restriction, the market has settled back for a period of watchful waiting. There appears to be sufficient interest in reclaims, however, to warrant the prediction that the percentage of reclaim to crude consumption will continue the rise which it has shown in the past few months. Quotations are unchanged since our last report.

High Tensile

Super-reclaim, black	.08¼	@	.08½
High Tensile Red	.07	@	.07¼

Shoe

Unwashed	.06½	@	.06¾
Washed	.08	@	.09

Tube

No. 1 (Floating)	.12	@	—
No. 2 (Compounded)	.07½	@	.07¾

Tires

Black	.05	@	.05¼
Black, selected tires	.05¼	@	.05½
Dark Gray	.06¼	@	.06½
White	.08	@	.08¾
Truck, Heavy Gravity	.05¼	@	.05½
Truck, Light Gravity	.05¾	@	.06

Miscellaneous

Mechanical blends	.04	@	.04¼

Scrap Rubber

Scrap rubber dealers report little demand at the moment from reclaimers indicating ample stocks on hand. Not much scrap is being offered by the trade presumably on the assumption that by holding off, stocks will command higher prices. Prices are unchanged with the exception of mixed auto tires, down $1.00 and inner tubes No. 1, up ¼ cent. Current quotations follow:

(Prices to Consumers)			
Auto tire peelings	ton	19.00	@20.00
Mixed auto	ton	10.00	@11.00
Clean solid truck tires	ton	35.00	@37.50
Boots and shoes	ton	25.00	@27.50
Arctics, untrimmed	ton	20.00	@22.50
Inner tubes, No. 1	lb.	.05½ @	.05¾
Inner tubes, No. 2	lb.	.03¼ @	.03½
Inner tubes, Red	lb.	.02½ @	.02⅝

Cotton

Cotton during April continued the downward trend started late in March and ended the month at 10.95 for spot, with an average of 11.80 cents compared to 12.30 cents in March. So far this month spot has varied from 11.00 to 11.65 cents and is not expected to show much improvement as long as profit taking continued. The New York Cotton Exchange Service says that the indications are that cotton growers will fertilize a larger part of their total cotton acreage this year and apply more fertilizer to the acre, where applied at all, than for several years. The futures market has been showing more strength lately in sympathy with other commodity markets. Foreign buyers have been active after selling steadily when prices were 1 cent higher a few weeks ago. Quotations on the N. Y. Cotton Exchange for Middling Uplands follow:

	April 10	May 10		
	Close	High	Low	Close
May	12.04	....	....	11.28
July	12.16	11.45	11.22	11.40
Oct.	12.29	11.61	11.38	11.56

Tire Fabrics

(Prices Net at the Mill—Process Tax Included)			
Peeler, carded, 23/5/3	lb.	.41½ @	—
Peeler, carded, 23/4/3	lb.	.42½ @	—
Peeler, carded, 15/3/3	lb.	.39½ @	—
Peeler, carded, 13/3/3	lb.	.38½ @	—
Egyptian, carded, 23/5/3	lb.	.52 @	.55
Egyptian, combed, 23/5/3	lb.	.56 @	—
CHAFERS			
Carded, American, 1 1/16"	lb.	.40½ @	.42½
Carded, American, 1"	lb.	.32 @	.33
LENO BREAKER			
Carded, American, 1 1/16"	lb.	.40½ @	.42½
Carded, American, 1"	lb.	.32 @	.33

Sheetings

Count	Width	Weight			
48x40	36 in.	5.50	lb.	— @	.05⅜
40x40	36 in.	6.15	lb.	— @	.05
40x36	36 in.	6.50	lb.	— @	.04¾
48x48	40 in.	2.50	lb.	— @	.10½
48x48	40 in.	2.85	lb.	— @	.09⅜
64x68	40 in.	3.15	lb.	— @	.10½
56x60	40 in.	3.60	lb.	— @	.08½
48x44	40 in.	3.75	lb.	— @	.07
44x40	40 in.	4.25	lb.	— @	.06¼

Ducks

Enameling	lb.	.32 @	.37½
Belting and Hose	lb.	.34 @	—
Single filling, A grade	lb.	.16¾ @	.17¼
Double filling	lb.	.17¾ @	.18¼

Closing Rubber Prices on New York Commodity Exchange, Inc.

No. 1 Standard Contract of 10 Tons

FROM APRIL 10 TO MAY 10

Date		Spot	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Sales
Apr.	10	11.75	11.65	11.72	11.87	12.02	12.15	12.29	12.39	12.49	12.61	12.70	12.80	12.90	——	585
	11	11.82	11.70	11.78	11.92	12.06	12.19	12.33	12.44	12.55	12.66	12.76	12.86	12.96	——	711
	12	12.00	11.90	11.94	12.08	12.22	12.36	12.50	12.62	12.73	12.84	12.95	13.05	13.15	——	1027
	13	12.08	11.95	12.02	12.13	12.27	12.40	12.54	12.65	12.75	12.85	12.95	13.05	13.16	——	869
	14	12.13	12.00	12.07	12.21	12.35	12.48	12.61	12.72	12.83	12.94	13.05	13.15	13.25	——	280
	15															
	16	11.94	11.85	11.91	12.05	12.20	12.31	12.44	12.54	12.64	12.75	12.84	12.94	13.04	——	582
	17	12.05	11.90	11.99	12.13	12.28	12.39	12.52	12.63	12.74	12.85	12.94	13.02	12.10	——	611
	18	12.15	12.00	12.09	12.23	12.38	12.49	12.60	12.70	12.80	12.90	13.00	13.10	13.20	——	404
	19	12.00	11.90	11.97	12.11	12.26	12.38	12.52	12.63	12.73	12.83	12.91	13.03	13.15	——	395
	20	12.37	12.25	12.27	12.41	12.56	12.67	12.79	12.91	13.01	13.11	13.22	13.32	13.43	——	889
	21	12.50	12.35	12.39	12.51	12.64	12.77	12.90	13.02	13.13	13.25	13.36	13.46	13.57	——	459
	22															
	23	12.50	12.40	12.46	12.58	12.71	12.83	12.95	13.07	13.18	13.30	13.40	13.49	13.58	——	590
	24	12.63	12.55	12.58	12.71	12.86	12.98	13.12	13.20	13.34	13.49	13.60	13.70	13.81	——	799
	25	12.44	12.25	12.30	12.44	12.58	12.70	12.83	12.90	13.01	13.14	13.24	13.34	13.45	——	616
	26	12.56	12.45	12.48	12.62	12.78	12.90	13.03	13.13	13.24	13.38	13.48	13.58	13.68	——	1035
	27	12.88	——	12.82	12.94	13.10	13.23	13.38	13.48	13.59	13.71	13.80	13.90	14.00	——	787
	28	12.63	——	12.57	12.68	12.84	12.91	13.08	13.13	13.26	13.45	13.55	13.65	13.75	——	530
	29															
	30	13.63	——	13.49	13.58	13.69	13.79	13.91	13.96	14.10	14.24	14.39	14.47	14.58	——	1336
May	1	14.25	——	14.14	14.24	14.34	14.45	14.57	14.68	14.79	14.90	15.02	15.13	15.24	15.35	1496
	2	14.13	——	14.02	14.12	14.23	14.33	14.47	14.55	14.65	14.74	14.85	14.95	15.05	15.15	1052
	3	14.23	——	14.13	14.23	14.32	14.47	14.59	14.69	14.81	14.92	15.01	15.13	15.23	15.33	926
	4	15.00	——	14.95	15.05	15.16	15.27	15.41	15.50	15.60	15.72	15.81	15.93	16.07	16.17	1293
	5	15.25	——	15.18	15.28	15.38	15.51	15.66	15.73	15.82	15.94	16.05	16.15	16.26	16.38	473
	6															
	7	15.25	——	15.23	15.31	15.39	15.52	15.67	15.74	15.87	15.99	16.11	16.20	16.30	16.40	1002
	8	15.12	——	15.06	15.14	15.25	15.36	15.53	15.62	15.73	15.87	15.93	16.00	16.08	16.18	1005
	9	13.87	——	13.77	13.85	13.94	14.06	14.21	14.30	14.39	14.49	14.55	14.66	14.78	14.89	1435
	10	13.75	——	13.64	13.72	13.80	13.90	14.01	14.11	14.20	14.30	14.40	14.50	14.60	14.70	937

Rubber CHEMICAL Markets

NEW YORK, May 10, 1934

[All Quotations F.O.B. Works Unless Otherwise Noted]

ACCELERATORS

Organic			
A-1	lb.	.21 @	.25
A-5-10	lb.	.33 @	.36
A-7	lb.	.53 @	.65
A-11	lb.	.60 @	.75
A-16	lb.	.55 @	.65
A-19	lb.	.56 @	.75
A-32	lb.	.70 @	.80
Aldehyde ammonia, crystals	lb.	.65 @	.67
Altax	lb.		
Captax	lb.		
Crylene	lb.	.55 @	.65
paste	lb.	.45 @	.55
Di-Ortho-Tolyguanidine	lb.	.46 @	.47
Diphenylguanidine	lb.	.36 @	.37
Ethylidene aniline	lb.	.45 @	.47½
Formaldehyde aniline	lb.	.37½ @	.42
Guantal	lb.	.42 @	.51
Heptene	lb.	.40 @	—
Hexamethylene-tetramine	lb.	.37 @	—
Lead Oleate, No. 999	lb.	.10 @	—
Witco	lb.	.10 @	—
Lithex	lb.	.18 @	.20
Methylenedianiline	lb.	.36 @	.37
Monex	lb.	3.25 @	—
Oxynone	lb.	.68 @	.80
Phenex	lb.	.50 @	.55
Pipsol X	lb.	3.55 @	4.00
R & H 40	lb.	.40 @	.41
R & H 50	lb.	.40 @	.41
R-2	lb.	1.55 @	1.90
R-2 Base	lb.	4.55 @	5.00
Safex	lb.	1.20 @	1.25
SPDX	lb.	.75 @	—
Super-Sulphur No. 1	lb.		
No. 2	lb.		
Thiocarbanilid, drums	lb.	.20 @	.23
Trimene	lb.	.75 @	—
base	lb.	1.20 @	—
Triphenylguanidine	lb.	.58 @	.60
Tuads	lb.		
Ureka	lb.	.62 @	1.00
Ureka C	lb.	.58 @	.69
Vulcanex	lb.		
Vulcone	lb.		
Vulcanol	lb.		
Z-88-P	lb.	.48 @	.60
Zimate	lb.		
Inorganic			
Litharge, domestic	lb.	.06¾ @	—
Magnesia, calcined, heavy	cwt.	4.00 @	4.50

COLORS

Blacks (See Compounding Materials)

Blues			
Prussian	lb.	.36 @	.38
Ultramarine	lb.	.07 @	.10
Browns			
Sienna, Italian	lb.	.06 @	'13
Umber, Turkey	lb	.04 @	.04½
Greens			
Chrome, light	lb.	.23 @	.26
medium	lb.	.24 @	.27
dark	lb.	.27 @	.30
Chromium Oxide, bbl.	lb.	.23 @	.27
Reds			
Antimony			
crimson, 15/7	lb.	.45 @	—
sulfur, free	lb.	.48 @	.52
Indian English	lb.	.09 @	.10
Domestic (Maroon)	lb.	.11 @	—
Red oxide, pure	lb.	.10 @	.12
Rub-Er-Red, f.o.b. Easton	lb.	.09¼ @	—
Whites			
Cryptone CB, No. 21	lb.	.06 @	.06¼
Cryptone, No. 19	lb.	.06 @	.06¼
Lithopone, Albalith	lb.	.04½ @	.04¾
Lithopone, Azolith	lb.	.04½ @	.04¾
Rayox	lb.		
Titanium oxide	lb.	.17 @	.19
Titanox B	lb.	.06 @	.06½
Titanox C	lb.	.06 @	.06½
XX Zinc Sulphide, bbls.	lb.	.11 @	.11¾
Zinc Oxide—American Process			
American Azo:			
ZZZ (lead free)	lb.	.05¾ @	.06
ZZ (leaded)	lb.	.05½ @	.05¾
Horsehead Lead Free Brand:			
Selected	lb.	.05¾ @	.06
Special	lb.	.05¾ @	.06
XX Red	lb.	.05¾ @	.06
XX	lb.	.05¾ @	.06
XX Green	lb.	.05¾ @	.06
Leaded Brand, Standard	lb.	.05½ @	.05¾
Sterling	lb.	.05½ @	.05¾
Superior	lb.	.05½ @	.05¾
Lehigh	lb.	.05¼ @	.05½
U. S. P., bbls.	lb.	— @	.12¾
Kadox, black label	lb.	.09⅜ @	.09⅝
Blue label	lb.	.08⅜ @	.08⅝
Red label	lb.	.07 @	.07¼
St. Joe, black label	lb.	.05¾ @	.06
green label	lb.	.05¾ @	.06
red label	lb.	.05¾ @	.06
Zinc Oxide—French Process			
Anaconda, lead free	lb.	.05¾ @	.06
Anaconda, selected lead free	lb.	.06¼ @	.06½
Florence White seal, bbls.	lb.	— @	.10⅜
Green seal	lb.	.09⅜ @	.09⅝
Red seal	lb.	.08⅜ @	.08⅝
Yellows			
Chrome	lb.	.15 @	.16
Ocher, dom. med.	lb.	.01½ @	.02

BLACKS

Arrow "Aerfloted" Specification	lb.	.0535 @	.0825
Bone, powdered	lb.	.05½ @	.12½
Carbon, compressed	lb.	.0535 @	.0825
uncompressed	lb.	.0535 @	.0825
"Certified," Cabot	lb.	.0535 @	.0825
Spherons	lb.	.0535 @	.0825
"Disperso"	lb.	.0535 @	.0825
Drop, bbls.	lb.	.05½ @	.14
"Excello," compressed	lb.	.0535 @	.0825
"Fumonex"	lb.	.03 @	.07
"Gastex"	lb.	.03 @	.07
Lampblack	lb.	.06 @	.08
"Micronex"	lb.	.0535 @	.0825
"Supreme"	lb.	.0535 @	.0825
Thermatomic—"P 33"	lb.	— @	—
"Thermax"	lb.	— @	—
United "Dixie" & "Kosmos"	lb.	.0535 @	.0825

COMPOUNDING MATERIALS

Aluminum Flake	ton.	21.85	@24.50
Ammonia carbonate, lump	lb.	.10½ @	.12
Asbestine	ton	14.00	@15.00
Barium carbonate (98-100%)	ton	56.50	@61.50
Barium Dust	lb.	.05 @	.06
Barytes southern off-color	ton	10.00	@18.00
Western prime white	ton	23.00	@30.00
Basofor	lb.	.04½ @	—
Bentonite	lb.	.02 @	.03
Blanc fixe dry f.o.b. works	ton	42.50	@75.00
Calcene	ton	35.00	@45.00
Catalpo (fact.)	lb.	.02 @	—
Chalk, precipitated			
Suprex white, extra lt.	ton	60.00	@75.00
heavy	ton	45.00	@55.00
Clay, Kaolin, domestic	ton	7.50	@15.00
Aerfloted, Suprex	ton	7.50	@10.00
Congaree	ton	9.00 @	—
Dark Blue Ridge	ton		
Dixie	ton		
Lexington	ton	10.00	@22.00
McNamee	ton		
Par	ton		
Tensulite	ton	15.00 @	—
Cotton Flock	lb.	.10½ @	.18
Glues, extra white	lb.	.20 @	.30
medium white	lb.	.14 @	.19
Kalite No. 1	ton	30.00	@55.00
Kalite No. 3	ton	40.00	@65.00
Magnesia, carbonate	lb.	.06 @	.06¾
Mica	lb.	.04 @	—
Rottenstone (powdered)	lb.	.02½ @	.05
Soapstone, powdered	ton	16.00	@22.00
Starch, powdered	cwt.	2.81	@ 3.01
Talc, domestic	ton	12.00	@15.00
Pyrax A	ton		
Whiting, commercial	ton	17.00	@18.00
English Cliffstone	ton	33.00	@43.00
Sussex	ton		
Witco	ton	20.00 @	—
Zinc Carbonate	lb.	.10½ @	—
Zinc Stearate	lb.	.23 @	—

MINERAL RUBBER

Genasco (factory)	ton.	25.00	@27.00
Hard Hydrocarbon	ton		
Parmr, solid	ton	21.00	@26.00
Pioneer, MR, solid	ton		
Pioneer-granulated	ton		

SPECIALTIES

Aromatics—Rodo	lb.		
Para-Dors No. 5145	lb.	2.00 @	—
Sunproof	lb.	.35 @	.37½
Sponge Paste	lb.	— @	.80
Tonox	lb.	.56 @	.60

SOFTENERS

Acids			
Nitric, 36 degrees	cwt.	5.00 @	5.25
Sulfuric, 66 degrees	cwt.	1.60 @	1.90
Tartaric, crystals	lb	.26 @	—
Acids, Fatty			
Laurex	lb.	.15 @	.16
Stearex	lb.	.08 @	.12
Stearic, double pressed	lb.	.08 @	.12
Alkalies			
Caustic Soda, 76%	cwt.	3.60 @	—
Soda Ash, 58% C.L.	cwt.	2.52 @	—
Oils			
Corn, refined, bbls	lb	.06¾ @	.07¼
Cottonseed, crude	gal.	— @	.04
Cycline Oil	gal.	.15 @	.28
Degras (c.l. 100 bbls.)	lb.	.02¾ @	—
Less c.l. (10-25 bbls.)	lb.	.03 @	—
Lots less than 10 bbls.	lb.	.03¼ @	—
Fluxrite	lb.	.05½ @	.06½
Palm Lagos	lb.	.03¾ @	.04
Niger	lb.	.03⅜ @	.03½
Para-Flux	gal.	.17 @	—
Petrolatum, light	lb.	.02½ @	—
Pigmentaroil, tank cars	gal.	.14 @	—
in drums	gal.	.20 @	.21½
Pine, steam distilled	gal.	.59 @	.61
dest. dist., drums	gal.	.50 @	.53
Seedine, c.l.	lb.	.07¼ @	—
Tackol	lb.	.08½ @	.18
Witco Palm Oil	lb.	.07½ @	—
Witco Softener (f.o.b. wks.)	lb.	.02 @	—
Woburn No. 8, c.l.	lb.	.06 @	—
Wobonite, c.l.	lb.	.05 @	—
Resins and Pitches			
Pitch, Burgundy	lb.	.05 @	.06
coal tar	gal.	.05½ @	.06
pine, 200 lb. gr. wt.	bbl.	6.00 @	—
Rosin, grade K, 290 lb.	bbl.	6.40 @	—
Pigmentar, tank cars	gal.	.14 @	—
in drums	gal.	.20 @	.21½
Tar Retort, drums	bbl.	12.50 @	—
Solvents			
Acetone, pure	lb.	.11 @	—
Alcohol, denatured,			
No. 1 bbls.	gal.	.43 @	—
Benzol, 90%	gal.	— @	.24
Bondogen	lb.	— @	—
Carbon, bisulfide	lb.	.05 @	.06
Carbon, tetrachloride	lb.	.06 @	—
Dichlorethylene	lb.	.29 @	—
Dipentene	gal.	.31 @	.41
Dryolene (f.o.b. Okla.)	gal.	.10 @	.10½
Ethylene dichloride	lb.	.05½ @	.06½
Gasoline, steel bbls.	gal.	.16 @	—
Naphtha, solvent	gal.	.26 @	.31
Plastogen	lb.		
Rub-Sol (f.o.b. Okla.)	gal.	.09 @	—
Turpentine, spirits	gal.	.55 @	—
wood	gal.	.50 @	—
dest. dist., drums	gal.	.43 @	.45
Waxes			
Beeswax, white	lb.	.34 @	.37
Carnauba	lb.	.20 @	.38
Ceresin, white	lb.	.10 @	.11
Montan, crude	lb.	.10 @	.11
Ozokerite, black	lb.	.24 @	.25
green	lb.	.26 @	.30
Paraffin (c.l.—f.o.b. N. Y.)			
Yellow crude scale	lb.	.03⅝ @	—
White crude scale 124/126	lb.	.03⅝ @	—
Refined, 125/127, 138/140	lb.	.04¼ @	—

ANTI-OXIDANTS

AgeRite, Gel	lb.		
Powder	lb.		
Resin	lb.		
White	lb.		
Albasan	lb.	.70 @	.75
Antox	lb.		
B-L-E	lb.	.57 @	.60
Flectol-A and Flectol-B	lb.	.54 @	.62
Neozone	lb.		
Oxynone	lb.	.68 @	.80
Resistox	lb.	.52 @	.65
Retardex	lb.	.35 @	.40
Stabilite	lb.	.57 @	.62
Stabilite Alba	lb.	.70 @	.75
VGB	lb.	.55 @	.60

MOLD LUBRICANTS

Dipex	lb.	.06 @	.08
Sericite, f.o.b. N. Y.	ton	65.00 @	—
Zip	lb.	— @	—

SUBSTITUTES (FACTICE)

Amberex	lb.	.13¾ @	—
Black	lb.	.08½ @	—
White	lb.	.08 @	.12
Brown	lb.	.07 @	.11½

VULCANIZING INGREDIENTS

Sulfur Chloride (drums)	lb.	.03½ @	.04½
Sulfur flour.			
Refined, 100% pure (bags)	cwt.	2.50 @	3.40
Commercial (bags)	cwt.	1.55 @	2.50
Telloy	lb.		
Vandex	lb.		

Crude Rubber
Latex and Guayule
Reclaimed Rubber
Tires and Tubes

STATISTICS OF THE INDUSTRY

Rim Production
Automobiles
Gasoline
Cotton Prices

U. S. Imports and Exports of Crude Rubber

YEARS	Gross Imports: Long Tons	Gross Imports: Total Declared Value	Gross Imports: Average Declared Value per pound Cents	Re-exports: Long Tons	Re-exports: Total Declared Value	Re-exports: Average Declared Value per pound Cents	Net Imports: Long Tons
1922	301,076	101,843,188	15.10	4,809	1,921,828	17.84	296,267
1923	309,144	185,060,304	26.72	8,772	5,672,319	28.87	300,372
1924	328,056	174,231,331	23.71	10,309	6,057,637	26.23	317,747
1925	396,642	429,705,014	48.36	14,827	19,847,753	59.76	381,815
1926	413,338	505,817,807	54.63	17,671	22,470,583	56.77	395,667
1927	426,258	339,874,774	35.60	27,775	24,735,488	39.76	398,483
1928	439,731	244,854,973	25.03	32,159	18,128,361	25.17	407,572
1929	560,084	239,178,783	19.15	36,485	16,868,733	20.64	523,599
1930	482,082	139,134,330	12.89	30,205	9,316,205	13.77	451,877
1931	497,138	72,918,949	6.54	25,595	4,255,472	7.42	471,543
1932	409,584	31,936,459	3.47	20,929	2,015,612	4.30	388,655
1933	407,817	44,034,064	4.82	20,537	2,601,352	5.65	427,280
1932:							
Feb.	27,959	2,690,250	4.29	1,915	222,584	5.19	26,044
Mar.	45,197	4,251,801	4.19	2,227	240,128	4.84	42,970
April	37,903	3,181,343	3.74	2,128	196,934	4.53	35,775
May	34,182	2,798,914	3.71	1,505	144,561	4.30	32,677
June	40,808	2,647,085	2.89	1,981	134,336	3.02	39,136
July	32,306	2,102,915	2.91	2,030	179,699	3.95	30,276
August	33,449	2,027,045	2.71	1,339	128,952	4.29	32,110
Sept.	28,956	1,774,403	2.73	2,388	241,960	4.54	26,568
Oct.	35,096	2,436,522	3.10	1,059	98,022	4.13	34,037
Nov.	28,908	2,263,469	3.48	1,745	158,618	4.06	27,163
Dec.	31,384	2,360,061	3.34	770	66,165	3.98	30,614
1933:							
Jan.	29,822	2,213,828	3.03	1,403	109,916	3.49	28,419
Feb.	22,603	1,554,086	3.12	1,244	102,129	3.73	21,359
Mar.	27,936	1,867,657	2.98	1,127	86,216	3.42	26,809
April	20,240	1,291,136	2.85	798	70,111	3.92	19,442
May	26,002	1,694,963	2.93	1,842	189,451	4.59	24,894
June	22,900	1,780,495	3.47	1,276	156,168	5.46	21,624
July	44,625	4,293,111	4.29	1,419	219,945	6.92	43,206
August	44,257	5,391,709	5.44	2,205	302,132	6.12	42,052
Sept.	44,912	6,110,956	6.07	2,369	335,798	8.89	42,543
Oct.	44,474	6,115,330	6.14	2,669	397,167	6.64	41,805
Nov.	40,582	5,850,714	6.44	2,188	333,631	6.81	38,394
Dec.	39,461	5,869,556	6.75	1,888	293,690	6.94	37,573
1934:							
Jan.	47,963	7,403,123	6.89	1,975	352,116	7.96	45,988
Feb.	34,335	5,262,711	6.84	2,133	476,232	9.97	32,202

March figures not available up to press time on May 14. [Editor]

United States Imports of Guayule, Balata, Jelutong, Liquid Latex

(All Quantities in Long Tons)

	Guayule: Tons	Guayule: Dollars	Balata: Tons	Balata: Dollars	Jelutong: Tons	Jelutong: Dollars	Liquid Latex (1): Tons	Liquid Latex (1): Dollars
1924	1,356	536,392	464	568,456	6,165	1,237,100	2,157	864,059
1925	3,781	1,803,448	517	574,750	6,749	1,642,531	3,853	3,537,810
1926	4,305	2,562,096	354	327,213	7,263	3,127,757	3,388	4,680,386
1927	5,018	2,674,957	582	447,246	7,785	2,448,657	1,116	876,677
1928	3,075	1,755,685	731	430,855	7,552	2,540,059	4,167	2,185,579
1929	1,231	545,175	728	566,964	8,203	2,458,136	3,728	1,787,997
1930	1,096	347,388	501	422,684	5,907	1,403,244	4,449	1,506,804
1931	—	—	1,208	411,692	5,777	1,019,010	4,650	884,355
1932	—	—	708	147,403	4,607	616,596	5,085	601,999
1933	—	—	1,658	2,261,869	5,989	944,895	11,085	1,833,671
1933:								
Feb.	—	—	12	2,923	391	52,171	367	46,037
Mar.	—	—	45	11,963	437	56,262	539	55,731
April	—	—	7	2,054	210	26,856	794	80,794
May	—	—	35	9,869	463	55,560	734	71,008
June	—	—	759	1,514,296	466	61,229	604	66,827
July	—	—	238	76,141	638	79,049	618	85,636
Aug.	—	—	272	527,147	390	55,509	1,156	196,138
Sept.	—	—	65	30,738	761	149,296	1,343	267,516
Oct.	—	—	119	47,663	542	99,249	1,561	310,531
Nov.	—	—	31	11,252	626	125,160	1,239	282,065
Dec.	—	—	42	20,008	708	143,868	1,290	270,533
1934:								
Jan.	—	—	98	43,932	766	169,966	1,126	239,054
Feb.	—	—	68	36,346	453	102,471	885	193,732

March figures not available up to press time on May 14. [Editor]

(1) Weight given in pounds of dry rubber contained in latex.

U. S. Consumption of Crude Rubber

(Rubber Manufacturers' Association statistics raised to 100 per cent—All figures in long tons)

Figures on Monthly Basis

	1927	1928	1929	1930	1931	1932	1933	1934
Jan.	31,518	34,403	43,002	36,194	28,557	29,648	21,661	40,413
Feb.	30,137	33,702	41,594	33,302	28,797	31,821	21,638	40,609
Mar.	36,141	35,688	44,730	35,540	32,788	29,505	18,047	47,614
Apr.	35,871	32,772	47,521	39,686	33,321	27,515	26,226	.....
May	34,592	37,333	49,233	39,386	37,817	30,957	44,580	.....
June	33,801	37,676	43,227	34,195	37,916	41,475	51,326	.....
July	29,219	37,407	41,526	29,508	31,397	29,976	50,184	.....
Aug.	33,460	42,927	38,274	30,850	27,586	23,721	44,939	.....
Sept.	27,214	39,882	34,707	25,515	23,638	23,847	35,686	.....
Oct.	26,790	40,857	34,800	27,516	22,277	22,286	31,906	.....
Nov.	26,792	37,461	27,659	23,691	22,943	23,231	29,162	.....
Dec.	25,492	31,232	25,531	21,682	21,409	18,015	29,087	.....
Tot.	371,027	441,340	469,804	375,980	348,986	332,000	405,689	.....

Figures on Quarterly Basis

Quarter	1926	1927	1928	1929	1930	1931	1932	1933
Jan./Mar.	94,301	99,216	103,558	128,565	101,610	89,652	85,309	64,326
Apr./June	87,109	103,242	103,500	139,292	112,229	107,755	92,643	125,126
July/Sept.	93,793	89,210	117,373	113,746	85,261	83,632	72,523	132,406
Oct./Dec.	83,212	80,860	117,597	84,872	72,020	65,645	64,145	94,198
Totals	358,415	372,528	442,227	466,475	371,120	346,684	314,620	416,056

Note—The quarterly figures are generally regarded as the most authentic; the monthly figures may be accepted as preliminary.

Reclaimed Rubber in the United States

(All Quantities in Long Tons)

Year	Production	Consumption: Tons	Consumption: % to Crude	Stocks*	Year	Production	Consumption: Tons	Consumption: % to Crude	Stocks*
1923	74,766	69,534	22.7	.....	1928	208,516	223,000	50.4	24,785
1924	80,079	76,072	22.4	.....	1929	218,954	226,588	48.4	27,464
1925	132,930	137,105	35.6	13,203	1930	157,967	153,497	40.8	22,000
1926	180,582	164,500	45.9	23,213	1931	133,351	124,126	33.9	19,257
1927	189,144	178,471	47.6	24,980	1932	75,608	77,504	23.4	16,354
1933:									
Jan.	5,301	4,811	21.0	16,262	July	12,049	10,317	20.6	14,108
Feb.	4,578	4,363	20.2	16,570	Aug.	11,708	9,446	21.0	15,037
Mar.	3,847	3,454	19.1	15,496	Sept.	10,435	7,862	22.0	15,869
Apr.	4,617	4,407	16.8	14,370	Oct.	9,466	7,212	22.6	17,748
May	8,366	7,770	17.4	13,734	Nov.	9,063	6,335	21.7	19,170
June	10,591	9,674	18.8	13,231	Dec.	9,539	5,951	20.5	20,746
1934:									
Jan.	9,828	7,000	17.3	24,263	July	....	....	...	....
Feb.	9,504	7,646	18.8	23,356	Aug.	....	....	...	....
Mar.	11,479	9,683	20.3	25,113	Sept.	....	....	...	....
Apr.	....	....	...	....	Oct.	....	....	...	....
May	....	....	...	....	Nov.	....	....	...	....
June	....	....	...	....	Dec.	....	....	...	....

* Stocks on hand at the end of month or year.
(Rubber Manufacturers' Association figures raised to 100%)

U. S. Consumption of Gasoline

(In Thousands of Barrels of 42 Gallons)

	1932	1933	1934		1932	1933	1934
January	26,038	26,510	29,416	August	35,706	37,426	.....
February ...	25,378	23,312	25,048	September ..	33,828	34,303	.....
March	29,597	28,227	29,733	October	32,680	32,973	.....
April	31,234	30,176	.....	November ..	29,895	30,262	.....
May	32,016	33,999	.....	December ..	27,110	28,787	.....
June	39,489	37,710	.....				
July	30,929	34,458	.....	Total	373,900	378,143	.....

Daily Spot Closing Prices of Ribbed Smoked Sheet Rubber—*New York Market, in Cents per Pound*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Ave.
1932																																
January	—	—	—	4½	4½	—	4⅝	4¾	4¾	—	4⅝	4⅝	4⅝	4¾	4⅝	4⅝	4⅝	4½	4⅝	4⅝	4⅝	4⅝	4⅝	—	—	4⅝	4⅝	4⅝	4¾	—	—	4½
February	4⅜	—	4½	4½	4½	—	—	—	4¾	—	4⅝	4⅝	4⅝	4¾	4⅝	4⅝	4⅝	4½	4⅝	4	—	4⅝	4⅝	—	—	4⅝	4⅝	4⅝	4¾	—	—	4
March	3½	—	3½	3½	3½	—	3⅝	3⅝	3½	4	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	4	3⅝	3⅝	—	3⅝	3⅝	3⅝	4	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3½
April	3	—	3	3	3	—	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
May	3	—	3¼	3¼	3¼	—	4	4	4	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞
June	2¾	2¾	2¾	2¾	2¾	—	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾
July	2½	—	2½	3⅛	3⅛	—	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	2⅝	3	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	2⅞
August	3⅛	—	3⅛	3⅛	3⅛	—	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛
September	4¼	—	4¼	4⅛	4⅛	—	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛
October	3¾	—	3⅝	3⅝	3⅝	—	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝
November	3⅞	—	3⅞	3⅞	3⅞	—	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞
December	3⅜	—	3⅜	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1933																																
January	—	—	3⅛	3⅛	3⅛	3⅛	3⅛	—	—	3⅛	3⅛	3⅛	3⅛	3⅛	—	3	3⅛	2⅞	3	3⅛	3	—	3	3⅛	3⅛	3⅛	2⅞	2⅞	2⅞	2⅞	3
February	2⅛	—	2⅛	3	—	2⅛	2⅛	—	2⅛	3	3	3	3	3	2⅞	3	2⅞	2⅞	2⅞	2⅞	2⅞	3	3⅛	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	2⅞	3
March	3⅛	—	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛
April	2⅞	—	2⅞	3	3	2⅞	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛	3⅛
May	4⅛	—	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛	4⅛
June	6⅛	—	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛	6⅛
July	7⅛	—	7⅛	8	—	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛
August	7⅛	—	7⅛	8	—	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛
September	7⅛	—	7⅛	8	—	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛
October	7⅛	—	7⅛	8	—	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛
November	7⅛	—	7⅛	8	—	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛	7⅛
December	9¼	—	9¼	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1934																																
January	—	9	8⅛	9	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10⅜	—	—	10⅜	—
February	9⅞	9⅛	—	—	10¼	9	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10½	9⅝	10⅜	10⅜	9⅛	10⅜	10⅜	10⅜	11⅛	10	10	9⅜
March	10½	10½	10⅛	—	10⅛	—	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	10⅜	11⅛	10⅞	11⅛	11⅛	11⅛	11⅛	11⅛	10⅞	11⅛	11⅛	10	—	10½
April	11¼	11⅜	—	11½	11⅝	—	11⅜	11⅜	11⅜	11⅜	11⅜	11⅜	12⅛	12⅛	12⅛	12⅛	12⅛	12⅛	12	12⅜	12⅛	12⅛	12⅜	12⅜	12⅜	12⅜	12⅛	12⅛	—	13⅜	—	12⅛
May	14¼	14⅜	—	15	15⅛	—	15½	15¼	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Spot Closing Prices—Ribbed Smoked Sheets

(New York Market)

Average Price per Pound for Years 1910-1929

Year	Cents	Year	Cents	Year	Cents	Year	Cents	Year	Cents
1910	206.60	1914	65.33	1918	60.15	1922	17.50	1926	48.50
1911	141.30	1915	65.85	1919	48.70	1923	29.45	1927	37.72
1912	121.60	1916	72.50	1920	36.30	1924	26.20	1928	22.48
1913	82.04	1917	72.23	1921	16.36	1925	72.46	1929	20.55

Average Monthly Price per Pound Since 1928

Month	1928 Cents	1929 Cents	1930 Cents	1931 Cents	1932 Cents	1933 Cents	1934 Cents
Jan.	40.25	20.14	15.24	8.34	4.38	3.08	9.32
Feb.	32.75	23.97	15.85	7.70	4.03	2.95	10.45
Mar.	26.82	24.55	15.34	7.71	3.35	3.01	11.01
Apr.	18.97	21.18	14.93	6.43	3.02	3.56	12.10
May	18.99	21.46	14.24	6.49	3.09	4.95	....
June	19.59	20.64	12.45	6.35	2.66	6.15	....
July	19.40	21.30	11.24	6.37	2.89	8.01	....
Aug.	19.46	20.59	9.96	5.38	3.63	7.31	....
Sept.	18.47	20.37	8.28	5.08	3.84	7.30	....
Oct.	18.83	19.67	8.20	4.87	3.65	7.64	....
Nov.	18.26	16.62	9.01	4.65	3.44	8.66	....
Dec.	17.97	16.12	9.05	4.64	3.24	8.87	....
Average for Year	22.48	20.55	11.98	6.17	3.49	5.96	....

London Closing Prices of Ribbed Smoked Sheet

(In Pence Per Pound)

Day	Feb.	Mar.	Apr.	May	Day	Feb.	Mar.	Apr.	May
1	4 11/16	4 11/16	—	6¾	17	4 11/16	5⅛	5 11/16	
2	4 11/16	4 11/16	—	6⅞	18	—	—	5 11/16	
3	4¾	4 11/16	5 7/16	6⅞	19	4 11/16	5 1/16	5 11/16	
4	—	—	5 7/16	7 1/16	20	4 11/16	5 1/16	5 11/16	
5	4 11/16	5	5 7/16	7¼	21	4¾	5 1/16	5⅛	
6	4 11/16	5 1/16	5 7/16	—	22	4 11/16	5 1/16	—	
7	4 11/16	5 1/16	5 7/16	7¼	23	5	—	5 11/16	
8	4 11/16	5 1/16	—	7⅛	24	5	5 1/16	5 11/16	
9	5	5 1/16	5 7/16	6 15/16	25	—	—	5 11/16	
10	5 1/16	5 1/16	5 11/16		26	4 11/16	5 1/16	5 11/16	
11	—	—	5 11/16		27	4 11/16	5 1/16	6 1/16	
12	4 7/16	5 1/16	5 11/16		28	4 11/16	5 1/16	6 1/16	
13	4 11/16	5 1/16	5 11/16		29	—	—	—	
14	4 11/16	5 1/16	5 11/16		30	—	—	6 1/16	
15	4 11/16	5 1/16	—		31	—	—	—	
16	4 11/16	5 1/16	5 11/16						

Average Monthly Price Per Pound

Month	1931 Pence	1932 Pence	1933 Pence	1934 Pence	Month	1931 Pence	1932 Pence	1933 Pence	1934 Pence
Jan.	4.160	3.052	2.264	4.429	Aug	3.385	2.654	3.811	
Feb.	3.823	2.760	2.093	4.920	Sept.	2.524	2.485	3.728	
Mar.	3.822	2.047	2.099	5.136	Oct.	2.898	2.425	3.957	
Apr.	3.082	1.876	2.323	5.712	Nov.	2.890	2.518	4.096	
May	3.035	1.825	2.966		Dec.	3.115	2.444	4.200	
June	3.082	1.750	3.392		Average for				
July	3.048	1.875	3.860		Year	3.155	2.434	3.233	

Spot Closing Cotton Prices

(Middling Upland Grade—New York Market)

Recent Daily Price Per Pound

Date	Mar.	Apr.	May	Date	Mar.	Apr.	May	Date	Mar.	Apr.	May
1	12.20	——	10.75	11	——	12.15		21	12.15	11.75	
2	12.50	12.15	11.00	12	12.50	12.10		22	12.15	——	
3	12.40	12.20	11.00	13	12.45	12.05		23	12.10	11.65	
4	——	12.25	11.30	14	12.45	12.10		24	12.25	11.35	
5	12.45	12.20	11.20	15	12.45	——		25	——	11.10	
6	12.35	12.30	——	16	12.35	11.80		26	12.20	10.90	
7	12.30	12.25	11.45	17	12.35	11.80		27	12.05	11.15	
8	12.45	——	11.65	18	——	11.80		28	12.00	11.15	
9	12.40	12.15	11.50	19	12.20	11.75		29	12.20	——	
10	12.35	12.25		20	12.30	11.80		30	——	10.95	
								31	——	——	

Average Monthly Price Per Pound

	1931 Cents	1932 Cents	1933 Cents	1934 Cents		1931 Cents	1932 Cents	1933 Cents	1934 Cents
Jan.	10.27	6.65	6.23	11.25	Aug.	7.21	7.43	9.55	
Feb.	10.96	6.85	6.05	12.28	Sept.	6.52	6.30	9.64	
Mar.	10.90	6.86	6.39	12.30	Oct.	6.32	6.30	9.58	
Apr.	10.19	6.16	7.02	11.80	Nov.	6.44	6.22	10.04	
May	9.38	5.72	8.64		Dec.	6.25	6.00	10.17	
June	9.05	5.02	9.47		Average for				
July	9.28	5.87	10.76		Year	8.56	6.41	8.63	

World Stocks of Crude Rubber

ON HAND OR AFLOAT TO THE U. S.

At End of	ON HAND 1932	ON HAND 1933	ON HAND 1934	AFLOAT 1932	AFLOAT 1933	AFLOAT 1934	ON HAND AND AFLOAT 1932	ON HAND AND AFLOAT 1933	ON HAND AND AFLOAT 1934
Jan.	322,860	396,376	368,660	42,234	32,539	45,768	365,094	428,915	414,428
Feb.	318,936	381,794	357,094	51,728	32,898	53,063	370,604	414,692	410,157
Mar.	329,586	390,135	351,064	44,190	29,531	54,722	373,776	419,666	405,786
Apr.	336,957	382,167		40,387	30,745		377,344	412,912	
May	336,719	364,623		50,453	43,342		387,172	407,965	
June	334,657	333,954		43,079	63,608		377,736	397,562	
July	333,729	326,609		37,894	57,435		371,623	384,044	
Aug.	342,888	325,148		42,846	53,084		385,734	378,232	
Sept.	346,154	334,637		46,188	57,255		342,342	391,892	
Oct.	358,282	343,579		40,176	58,568		398,458	402,147	
Nov.	360,386	353,852		40,879	57,140		401,265	410,992	
Dec.	379,000	364,541		38,360	55,606		417,360	419,147	

(Rubber Manufacturers' Association figures raised to 100%)

STOCKS IN GREAT BRITAIN

Stocks in London

(No. of Tons in Wharves and Warehouses, including Latex)

At end of	1932	1933	1934	At end of	1932	1933	1934
Jan.	67,164	36,481	38,570	July	48,842	41,178	
Feb.	65,942	37,182	38,752	Aug.	47,079	39,480	
Mar.	64,280	40,689	40,501	Sept.	44,942	39,237	
Apr.	61,848	40,911		Oct.	42,327	37,101	
May	56,089	41,998		Nov.	40,606	36,139	
June	51,009	43,032		Dec.	37,407	35,615	

At End of Recent Weeks

	First Saturday	Second Saturday	Third Saturday	Fourth Saturday	Fifth Saturday
1933					
November	37,170	36,831	36,443	36,360	
December	36,165	35,853	35,970	35,643	35,777
1934					
January	36,478	37,326	38,333	38,537	
February	39,064	39,509	40,133	39,775	
March	39,680	39,670	40,174	40,178	40,480
April	40,994	41,458	41,589	42,539	
May	41,815				

Stocks in Liverpool

1933					
November	52,818	52,910	52,466	52,418	
December	51,894	51,803	51,954	51,206	51,014
1934					
January	51,434	51,897	52,256	52,037	
February	51,937	52,615	52,920	52,944	
March	52,832	53,488	53,929	54,109	54,004
April	54,464	53,832	54,119	53,917	
May	53,915				

STOCKS IN PENANG AND SINGAPORE

(Stocks held by Dealers—Quantities in Long Tons)

End of	1931	1932	1933	1934	End of	1931	1932	1933	1934
Jan.	48,802	48,850	22,525	40,405	July	51,203	17,017	36,972	
Feb.	49,283	46,954	21,530	41,884	Aug.	48,971	20,649	38,601	
Mar.	49,590	46,591	24,594	47,933	Sept.	47,025	20,415	36,948	
Apr.	45,868	39,663	25,460		Oct.	52,132	23,158	37,282	
May	44,278	38,690	29,822		Nov.	46,947	25,419	39,018	
June	47,517	19,770	34,676		Dec.	45,795	25,341	38,269	

STOCKS IN OTHER CENTRES

End of:	Malaya Mainland	Afloat for Europe	Holland	Colombo	Para and Manaos
Feb., 1933	37,323	28,540	2,033	4,210	6,006
Mar.	33,494	26,180	2,183	3,779	5,780
Apr.	33,391	27,710	2,214	3,428	5,204
May	32,613	24,090	1,534	3,177	4,790
June	35,919	22,930	1,147	2,913	4,321
July	35,020	22,900	1,007	3,208	3,830
Aug.	36,756	22,000	1,033	3,411	3,588
Sept.	36,083	25,900	1,107	4,286	3,288
Oct.	37,392	28,320	1,411	4,889	3,237
Nov.	36,965	38,530	1,285	5,575	3,383
Dec.	38,441	36,700	1,052	5,792	2,981
Jan. 1934	36,788	35,000	1,115	7,271	3,305
Feb.	39,630	35,000	906		3,420
Mar.	37,275	35,000			3,519

Rims Inspected and Passed in U. S.

(Tire and Rim Association Reports)

	Total		Total		Total
1924	21,863,311	1928	24,247,282	1932	6,261,336
1925	26,001,664	1929	24,141,502	1933	8,713,962
1926	24,199,524	1930	17,364,096	1934	.....
1927	19,700,003	1931	11,253,800	1935	.....

1934:		1934:		1934:	
January	789,274	May	.....	September	.....
February	1,262,311	June	.....	October	.....
March	1,651,548	July	.....	November	.....
April	1,635,722	August	.....	December	.....

U. S. Tire and Tube Statistics[1]

(All Figures Represent Thousands)

AUTOMOBILE CASINGS

Figures for Recent Years

	1926	1927	1928	1929	1930	1931	1932	1933
Production	61,237	64,439	77,944	68,726	50,965	48,739	40,085	45,304
Shipments	59,002	64,059	74,296	69,395	53,638	48,151	40,260	44,094
Inventory [2]	10,456	10,264	13,624	11,838	9,003	7,775	7,644	8,888

Figures for Recent Months

	PRODUCTION 1932	PRODUCTION 1933	PRODUCTION 1934	SHIPMENTS 1932	SHIPMENTS 1933	SHIPMENTS 1934	INVENTORY 1932	INVENTORY 1933	INVENTORY 1934
Jan.	3,462	2,258	3,922	3,253	2,597	3,222	7,912	7,237	9,684
Feb.	3,871	2,339	4,335	2,553	2,292	3,258	9,172	7,377	10,725
Mar.	3,671	2,038		2,954	2,092		9,878	7,290	
Apr.	3,517	3,123		3,698	3,654		9,846	6,778	
May	3,820	5,189		4,258	5,180		9,379	6,760	
June	5,643	6,100		10,065	6,305		4,999	6,615	
July	3,617	5,714		2,404	5,497		6,203	6,844	
Aug.	3,089	4,994		2,655	4,707		6,659	7,070	
Sept.	2,539	3,999		3,082	3,503		6,096	7,595	
Oct.	2,569	3,429		1,799	2,537		6,876	8,462	
Nov.	2,304	3,039		1,711	2,197		7,454	9,247	
Dec.	1,983	3,082		1,819	3,531		7,646	8,888	

AUTOMOBILE INNER TUBES

Figures for Recent Years

	1926	1927	1928	1929	1930	1931	1932	1933
Production	76,618	70,823	80,180	68,829	52,420	48,333	36,891	42,546
Shipments	71,591	72,896	77,127	70,592	54,938	50,021	37,911	41,391
Inventory [2]	16,200	13,692	16,117	12,807	9,999	7,922	6,749	7,815

Figures for Recent Months

	PRODUCTION 1932	PRODUCTION 1933	PRODUCTION 1934	SHIPMENTS 1932	SHIPMENTS 1933	SHIPMENTS 1934	INVENTORY 1932	INVENTORY 1933	INVENTORY 1934
Jan.	3,308	2,093	3,530	3,529	2,535	3,199	7,719	6,197	8,403
Feb.	3,281	2,224	4,077	2,728	2,102	3,323	8,760	6,357	8,445
Mar.	3,502	1,883		2,686	1,902		9,448	6,369	
Apr.	3,225	2,853		3,385	3,051		9,441	6,189	
May	3,409	4,700		3,867	4,463		8,913	6,382	
June	5,279	5,448		9,019	5,778		5,174	6,097	
July	2,937	5,603		2,160	5,211		5,975	6,440	
Aug.	2,748	4,916		2,503	4,687		6,127	6,628	
Sept.	2,601	3,827		3,098	3,472		5,753	7,008	
Oct.	2,187	3,506		1,658	2,676		6,214	7,831	
Nov.	2,005	2,863		1,578	2,103		6,662	8,625	
Dec.	1,779	2,631		1,724	3,410		6,749	7,815	

(1) Rubber Manufacturers' Association figures, raised to 100%. The Association estimates its figures to be 75% complete up until 1929 and 80% complete for 1929-1933. Beginning 1934, the Association reported its figures to be 97% complete.

(2) Held by manufacturers at end of period indicated.

Automobile Production

	United States Total	United States Passenger Cars	United States Trucks	Canada Total	Canada Passenger Cars	Canada Trucks	Grand Total
1928	4,357,384	3,826,613	530,771	242,382	196,737	45,645	4,599,944
1929	5,358,420	4,587,400	771,020	263,295	207,498	55,797	5,621,715
1930	3,355,986	2,814,452	540,534	154,192	125,442	28,750	3,510,178
1931	2,389,730	1,973,090	416,640	82,621	63,477	19,144	2,472,351
1932	1,370,678	1,135,493	235,187	60,816	50,718	10,098	1,431,494
1933*	1,959,945	1,606,703	353,242	65,924	53,855	12,069	2,025,869
1933*							
Feb.	106,888	91,492	15,396	3,298	3,025	273	110,186
Mar.	118,002	99,885	18,117	6,632	5,927	705	124,634
Apr.	180,713	153,350	27,363	8,255	6,957	1,298	188,968
May	218,347	184,698	33,649	9,396	8,024	1,372	227,743
June	253,387	211,483	41,904	7,323	6,005	1,318	260,710
July	233,141	195,023	38,118	6,540	5,322	1,218	239,681
Aug.	236,556	195,144	41,412	6,079	4,919	1,160	242,635
Sept.	196,143	160,900	35,243	5,808	4,358	1,450	201,951
Oct.	138,542	108,073	30,469	3,682	2,723	959	142,224
Nov.	63,987	44,429	19,558	2,291	1,503	786	66,278
Dec.	84,152	53,900	30,252	3,262	2,171	1,091	87,414
1934							
Jan.	161,086	116,353	44,733	6,904	4,946	1,958	167,990
Feb.*	235,384	190,280	45,104	8,571	7,101	1,470	243,955
Mar.	335,993	278,151	57,842	14,180	12,272	1,908	350,173

* Revised.

Exports of Crude Rubber from Principal Producing Countries

(Long Tons)

	BRITISH MALAYA [1]							DUTCH EAST INDIES [5]						
	Gross Exports	Gross Exports Minus Imports	Imports	Ceylon [2]	India & Burma [3]	Sarawak [4]	British North Borneo [3]	Siam [4]	Java & Madura	Sumatra E. Coast	Other D.E.I.	Indo-China [3]	Amazon Valley	All Other [6]	World Total [7]
1923	252,816	70,432	181,584	39,971	6,416	5,705	4,237	1,718	32,930	46,344	57,822	5,067	16,765	7,856	406,415
1924	259,706	108,524	151,182	39,997	7,697	6,699	4,621	2,962	42,446	54,497	80,347	6,688	23,165	9,065	429,366
1925	316,825	158,022	158,803	49,566	10,082	5,424	5,377	5,377	46,757	65,499	120,626	7,881	25,298	13,797	514,487
1926	391,328	151,243	240,085	58,962	9,874	9,155	6,079	4,027	52,186	71,413	121,231	8,203	24,298	16,017	621,530
1927	371,322	182,845	188,477	55,356	11,321	10,923	6,582	5,472	55,297	77,815	142,171	8,645	28,782	15,633	606,474
1928	409,430	149,787	259,643	57,267	10,790	10,087	6,698	4,813	58,848	82,511	121,770	9,548	21,129	10,690	653,794
1929	574,836	163,092	411,744	81,584	11,663	11,077	7,381	5,018	65,990	87,789	134,037	9,696	21,148	6,767	853,894
1930	547,043	133,876	413,167	76,970	10,782	10,309	6,781	4,251	69,755	79,396	115,254	7,665	14,260	5,651	814,241
1931	519,740	125,506	394,234	61,769	8,470	10,451	6,247	4,218	75,952	87,747	116,009	11,696	12,121	3,296	792,203
1932	478,252	92,539	385,713	48,973	3,888	6,960	4,664	3,451	61,312	79,837	85,871	13,883	6,450	1,816	702,818
1932:															
Sept.	41,973	8,869	33,104	5,238	122	614	400	340	3,858	6,485	7,664	1,621	318	78	59,733
Oct.	37,931	9,798	28,133	2,945	139	583	350	428	4,022	7,051	8,944	1,147	414	247	54,403
Nov.	40,098	10,072	30,026	4,146	185	683	350	371	4,368	6,250	9,080	805	1,164	156	57,588
Dec.	40,118	10,089	30,029	5,801	367	644	350	406	4,683	7,066	8,594	1,211	824	150*	59,493
1933:															
Jan.	46,599	7,857	38,742	4,602	318	590	458	305	4,766	5,630	6,840	1,957	554	125*	58,887
Feb.	37,564	6,167	31,397	5,064	304	541	458	368	4,895	5,119	6,081	895	620	125*	55,867
Mar.	42,059	7,964	34,095	4,905	389	571	458	304	5,092	6,466	6,999	1,102	995	125*	61,501
Apr.	36,752	7,758	28,994	4,582	272	624	583	235	5,226	5,969	8,147	1,122	556	125*	56,435
May	42,902	13,664	29,238	4,643	475	1,091	583	359	6,782	7,298	13,195	1,371	918	125*	66,078
June	41,411	16,538	24,873	5,198	377	1,149	582	632	7,352	6,654	14,779	1,369	704	125*	63,794
July	50,531	18,772	31,759	4,201	270	1,358	728	797	7,367	8,580	16,534	1,310	913	125*	73,942
Aug.	52,266	17,869	34,397	5,839	246	955	728	926	6,460	7,985	15,161	808	1,116	125*	74,746
Sept.	49,607	15,146	34,461	5,111	125	1,027	728	611	5,868	9,164	15,005	1,702	656	125*	74,455
Oct.	61,002	17,390	43,612	5,674	271	959	750*	979	6,329	8,682	15,170	1,513	965	125*	84,879
Nov.	54,599	20,142	34,457	6,097	516	1,020	750*	1,191	6,684	9,951	14,474	1,599	956	125*	77,820
Dec.	57,579	18,110	39,469	7,062	964	989	750*	1,046	7,030	10,183	17,274	2,173	930	125*	87,995
1934:															
Jan.	55,055	21,184	33,871	7,551	1,531	1,197	750*	1,290	6,513	8,974	17,718	2,158	576	125*	82,254
Feb.	57,867	19,688	38,179	8,354	775	1,005	750*	1,264	6,706	10,277	17,466	1,100	831	125*	86,832
Mar.	58,515	26,470	32,045	6,954	.....	1,360	750*	1,363	8,655	12,043	25,064	1,316	846	125*	.....
Apr.	56,748	27,963	28,785	5,783	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

(1) Malayan net exports cannot be taken as production, since imported rubber is largely wet native rubber, which is reduced about one-third in weight by remilling; rubber exported as latex is not included which on a basis of 3½ pounds per gallon amounted to 115 tons in 1923, 1,117 in 1924, 3,618 in 1925, 3,263 in 1926, 2,439 in 1927, 1,437 in 1928, 2,670 in 1929, and 1,274 in 1930. (2) Ceylon Chamber of Commerce statistics until 1926; rubber exported as latex is not included—such shipments were equivalent to 18 tons in 1923, 93 tons in 1924, 6 tons in 1925, 20 tons in 1926, about ½ ton in 1927, and 1 ton in 1928, and practically none in 1929, 1930 and 1931. (3) Official statistics. (4) Imports into Singapore and Penang. (5) Exports from "Other D.E.I." are chiefly wet native rubber, which is reduced about one-third in weight by remilling; rubber exported as latex is not included which on a basis of 3½ pounds per gallon amounted to 2,342 tons in 1923, 1,008 tons in 1924, 2,239 tons in 1925, 44 tons in 1926, 84 tons in 1927, 1,459 tons in 1928, 1,302 tons in 1929, and 2,656 tons in 1930. (6) Calculated from official import statistics of principal consuming countries, viz., United States, United Kingdom, France, Germany, Belgium and Netherlands, and includes guayule rubber. (7) This total includes the third column for British Malaya, "Gross Exports minus Imports," and all the figures shown for the other territories. * Figure is provisional; final figure will be shown when available.

Net Imports of Crude Rubber into Principal Manufacturing Countries

(Long Tons)

	United States [1]	United Kingdom	France (h)	Germany	Canada (ac)	Japan (da)	Italy	Russia (ce)	Australia (cd)	Belgium (d)	Netherlands	Scandinavia (abcdf)	Spain (g)	Czechoslovakia (abcd)	World Total
1919	238,407	42,671	17,685	5,584	6,395	9,753	9,894	75	1,002	3,995	2,771	3,149	2,418	9	343,808
1920	249,530	56,844	13,883	11,890	11,746	5,297	6,123	62	1,815	3,840	5,510	2,292	2,008	567	371,409
1921	179,736	42,087	15,135	21,920	8,124	21,713	3,906	165	1,014	1,705	1,022	1,279	2,245	569	300,620
1922	296,594	11,724	24,352	27,546	9,207	15,934	6,430	2,493	2,643	172	—3,807	1,778	589	567	396,222
1923	301,527	12,700	27,392	18,519	13,277	15,372	8,489	2,986	1,649	2,184	792	2,528	630	1,128	409,173
1924	319,103	—11,550	30,446	22,727	14,299	19,571	8,764	2,346	3,124	2,688	—807	3,178	944	1,370	416,203
1925	385,596	4,061	32,956	33,937	19,683	11,117	11,412	7,088	4,757	2,930	875	3,149	1,155	1,558	520,274
1926	399,981	84,865	34,240	22,775	20,229	18,125	9,809	6,529	9,021	2,498	2,670	4,046	1,299	1,870	617,957
1927	403,472	60,249	34,271	38,892	26,405	20,521	11,381	12,018	9,490	6,482	636	4,224	2,055	2,672	632,768
1928	407,572	4,846	36,49b	37,855	30,447	25,621	12,433	15,134	8,430	7,958	2,243	4,418	3,178	3,138	599,771
1929	528,608	122,675	55,093	49,275	35,453	34,284	17,169	11,774	15,886	9,445	3,022	6,440	864	4,650	894,638
1930	458,036	120,069	68,503	45,488	28,793	33,039	18,639	16,387	5,354	10,635	2,924	7,710	2,400	4,468	822,445
1931	475,993	86,170	46,466	39,688	25,261	43,483	10,149	30,671	7,649	11,009	2,220	6,360	2,605	7,717	794,641
1932	393,844	44,086	42,50b	45,121	20,917	56,027	14,469	30,637	12,576	9,519	2,851	7,262	4,359	9,444	693,618
1932:															
Nov.	27,689	4,950	3,830	3,577	1,593	4,563	1,265	1,481	1,653	1,035	275	489	631	650	53,681
Dec.	31,246	1,182	3,205	4,623	941	5,603	2,103	3,720	745	1,298	348	544	485	2,602	57,645
1933:															
Jan.	29,260	3,277	5,858	4,241	1,189	7,611	3,005	1,558	1,275	1,388	308	640	252	838	60,700
Feb.	22,970	7,102	6,603	4,460	1,175	8,508	994	2,820	2,001	1,670	375	564	132	681	60,055
Mar.	27,348	8,883	6,093	4,425	1,114	6,035	1,604	2,088	1,904	952	282	649	340	688	62,405
Apr.	20,236	7,765	6,308	4,805	555	5,495	2,215	2,274	1,580	882	163	606	281	400	53,565
May	24,894	11,085	4,144	4,622	1,704	5,289	1,278	1,691	425	710	—525	536	433	432	56,718
June	22,228	8,739	4,056	3,639	1,441	3,330	1,997	2,000	613	469	—519	772	541	400	49,706
July	43,824	3,961	3,774	4,103	1,192	1,460	1,146	2,952	2,347	299	16	486	435	287	66,282
Aug.	**43,208**	**4,330**	**5,25.**	**4,193**	**1,795**	**4,426**	**1,249**	3,312	1,500	325	209	616	606	2,759	73,779
Sept.	43,886	4,341	4,111	5,84.	2,620	5,369	2,055	2,168	794	864	189	604	790	577	74,211
Oct.	43,366	3,373	4,921	4,772	2,580	6,150	1,836	2,085	604	1,118	310	777	44.	686	73,081
Nov.	39,633	3,955	5,419	4,086	2,184	6,296	942	4,483	301	1,129	222	878	493	882	70,903
Dec.	38,864	6,524	5,415	4,933	1,773	6,865	1,029	2,400	190	1,360	213	703	776	1,772	72,817
1934:															
Jan.	47,114	9,503	6,843	6,057	1,721	5,628	2,517	3,438	566	2,173	381	1,185	484	1,355	88,965
Feb.	33,087	10,785	7,373	5,490	1,854	.....	.....	.....	950	1,538	287	464	.....	516	.....
Mar.	39,306	14,008	.....	.....	3,411	.....	.....	.....	671	.....	.....	.....	.....	.....	.....

a—Including gutta percha. b—Including balata. c—Re-exports not deducted in monthly statistics. d—Including some scrap and reclaimed rubber. e—Official statistics of rubber imports by Soviet Russia. f—Including Norway, Sweden, Denmark and Finland. g—United Kingdom and French exports to Spain except in years prior to 1925. h—French imports have been reduced 12 per cent in order to eliminate imports of gutta percha and to reduce to basis of net weight. [1] United States imports of guayule are included in this compilation. * Figure is provisional; final figure will be shown immediately it becomes available.

A Section Devoted to Listings of Leading Producers and Distributors of Raw Materials, Machinery and Equipment, and Supplies for the Rubber Industry.

The Market Place

Chemicals and Compounding Materials — Machinery and Equipment—Crude, Reclaimed and Scrap Rubber—Fabrics—Rubber Products — Consulting Engineers.

Chemicals and Compounding Materials

ACCELERATORS—
Ureka C—Ureka Blend B—Ureka.—A-1, A-7, A-11, A-16, A-19, A-32, Z-88, A-510, DPG
ANTIOXIDANTS — Flectol A, Oxynone
The RUBBER SERVICE Laboratories Co.
611 Peoples Sav. & Trust Bldg., Akron, O.
A Division of MONSANTO Chemical Wks.

ANTIMONY Pentasulphide, golden and crimson, very fine, pure.
Rare Metal Products Co.
Belleville, N. J.
Direct Factory Representation

ASBESTINE—Specially prepared for use in Rubber. Send for liberal working samples.
SOLE PRODUCERS
International Pulp Co.
41 Park Row New York City

CARBON BLACK—*Micronex* the world's standard gas black, universally known as the "King of Rubber Pigments."
Binney & Smith Co.
41 East 42nd St. New York City

CABOT CERTIFIED CARBON BLACK
"Spheron"
Godfrey L. Cabot, Inc.
940 Old South Bldg., Boston, Mass.

CARBON BLACK—*Aerfloted*
Arrow Black for rubber compounding. Standard for grit-free uniformity.
J. M. Huber, Inc.
460 West 34th St. New York

CARBON BLACK
SUPREME—*the up-to-date standard for rubber*
Imperial Oil & Gas Products Co.
Union Bank Bldg., Pittsburgh, Pa.

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DIXIE—KOSMOS—TRIANGLE
United Carbon Company
Manufacturers 1/3 the World's Supply
Chicago, New York, San Francisco, Akron, Charleston, W. Va.

CATALPO—The universal and standard rubber pigment now being used in treads, solids, tubes, carcass frictions, etc.
Moore & Munger
33 Rector Street, New York City

CHEMICALS
For Rubber — For Industry Generally
Accelerators — *Acids* — *Latex*
Antioxidants — *Oil of Myrbane* — *Latol*
Specialties — *Aniline Oil* — *Dispersions*
The Naugatuck Chemical Co.
1790 BROADWAY NEW YORK

CHEMICALS and compounding ingredients; Clay, Accelerators, Mineral Rubber.
R. T. Vanderbilt Co.
230 Park Ave. New York City

CHEMICALS and Mineral Ingredients—Whiting, Clay, Talc, Barytes, Colors. Heavy Calcined Magnesia. Carbonate of Magnesia, Pumice Stone.
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COLLOIDAL ZINC OXIDE
COLLOIDAL COLORS
Heveatex Corporation
78 Goodyear Ave., Melrose, Mass.
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Rosebank, Staten Island, N. Y.
820 So. Clinton St., Chicago, Ill.
Agents in Principal Cities

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For All Cures
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Akron, Ohio

CUMAR—Paracumarone Resin.
A neutral gum for rubber compounding.
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